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RELATIONSHIPS BETWEEN CHEMICAL STRUCTURE  
AND RAT REPELLENCY. II. COMPOUNDS  
SCREENED BETWEEN 1950 AND 1960

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Natick, Massachusetts

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The repellent activities of the functional groups represented, alone or in combinations, are expressed in Table II by a Functional Group Repellency Index. A ranking of these indices suggests that acyclic and heterocyclic compounds containing tri- or pentavalent nitrogen would be a parent compound of choice for synthesizing novel repellents. Other molecular arrangements, spatial configurations and combinations of functional groups are compared.

There were 123 active, interesting or promising compounds included in the 699 having K values of 85 or greater, which were selected for the barrier appraisal study. These chemicals were formulated in selective solvents at several concentrations and applied to burlap. Small food bags were fashioned using the fabric impregnated with the candidate formulation, and exposed to rodent attack following storage periods of varying intervals. The results of these tests are listed in Table III. Again, those compounds containing nitrogen in the functional groupings indicated a high order of effectiveness. Several commercial patents covering rodent repellents were issued using the data from the food acceptance and barrier studies.

Organizations and cooperators which supplied samples for the program are listed in Appendix I. The Wiswesser cipher for compounds in Table I is used in Appendix II to facilitate location of chemicals by sample code number as they appear under the index headings, and for computer storage and analysis.

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TECHNICAL REPORT  
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RELATIONSHIPS BETWEEN CHEMICAL STRUCTURE AND RAT REPELLENCY.  
II. COMPOUNDS SCREENED BETWEEN 1950 AND 1960.

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Natick, MA 01760

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## FOREWORD

This report was prepared under transfer of funds from Project LJ062110A585, Biological Research on the Protection of Materiel from Insects, Rodents and Other Animals. The primary effort involved classification, coding and retrieval of data assembled over a 10 year period. The report includes compounds tested for rodent repellency between 1950 and 1960 using a food consumption method resulting in a "K value." Evaluation of compounds since 1960 was done by a more precise method and may be compiled in a subsequent report. Most of the compounds tested under the NLABS program are included in this report.

Since 1964 emphasis has been placed on development and applications of known repellents. Screening was limited to compounds in classes having precedent for repellent activity, or which were known to have fungicidal activity, since this relationship with rodent repellency was clearly established during earlier screening tests. Thus, some of our most active rodent repellents were found among the known fungicidal organic tins, particularly, tributyltin chloride, which was developed as a protectant against rodent damage to electrical cables.

Some may wonder why time and money should be expended on compilations such as this, since most of the compounds listed were inactive or never exploited. Justification, if needed, lies in the current status of toxic animal control agents. A large portion of the effort in searching for such agents is becoming centered on nontoxic chemicals, among which are repellents and attractants. This compilation thus affords an opportunity for those seeking repellents and attractants to exploit further compounds showing significant repellency, and to study molecular relationships of active compounds in order to synthesize or test similar compounds. An unexplored aspect of this compilation is found in those compounds showing negative repellency, i.e., having a minus K value. Further studies might reveal some of these to be attractants, arrestants or feeding stimulants thus opening new approaches to rodent control.

It is hoped that this publication will enhance the search for rodent control agents which take advantage of biological activities which are less hazardous to favorable species than are toxicants.

JOHN J. PRATT, JR.  
Project Officer

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## ABSTRACT

Over 4,600 compounds, chiefly organic types, were evaluated using both a food acceptance test (Part A) and a barrier penetration bioassay (Part B), to correlate relationships between chemical structure and rodent repellency.

These chemicals are indexed and classified according to the functional groups present and to the degree of substitution within their molecular structures. The results of reduction in food consumption for each compound appraised are calculated and their K values listed in Table I.

The repellent activities of the functional groups represented, alone or in combinations, are expressed in Table II by a Functional Group Repellency Index. A ranking of these indices suggests that acyclic and heterocyclic compounds containing tri- or pentavalent nitrogen would be a parent compound of choice for synthesizing novel repellents. Other molecular arrangements, spatial configurations and combinations of functional groups are compared.

There were 123 active, interesting or promising compounds included in the 699 having K values of 85 or greater, which were selected for the barrier appraisal study. These chemicals were formulated in selective solvents at several concentrations and applied to burlap. Small food bags were fashioned using the fabric impregnated with the candidate formulation, and exposed to rodent attack following storage periods of varying intervals. The results of these tests are listed in Table III. Again, those compounds containing nitrogen in the functional groupings indicated a high order of effectiveness. Several commercial patents covering rodent repellents were issued using the data from the food acceptance and barrier studies.

Organizations and cooperators which supplied samples for the program are listed in Appendix I. The Wiswesser cipher for compounds in Table I is used in Appendix II to facilitate location of chemicals by sample code number as they appear under the index headings, and for computer storage and analysis.

RELATIONSHIPS BETWEEN CHEMICAL STRUCTURE AND RAT REPELLENCY:  
II. COMPOUNDS SCREENED BETWEEN 1950-1960

INTRODUCTION

Rodents, principally rats and mice, cause extensive damage to stored products and other food and non-food materials by their chewing behavior. Although behavioral and physiological research now in progress will undoubtedly suggest new methods to prevent such chewing, practically all research to date has been directed toward finding chemicals sufficiently aversive to rodents to repel them. Since 1946, the U. S. Army's Natick Laboratories have supported a program of evaluating chemicals as rodent repellents for protecting food packaging, electric cable coatings, and other materials.

Under this program, more than 7,000 compounds, mostly organic, have been screened for repellent activity. However, only a small fraction of these, less than 10 percent, were sufficiently active to consider for barrier tests--"second-level" evaluation on small burlap food sacks. Still fewer (less than 2 percent) were feasible to formulate onto specific materials, such as the burlap used in these tests.

Bellack *et al.* (1) listed the compounds tested under this program through 1949 and discussed relationships between their chemical structure and their activity as repellents. This report covers some 4,600 compounds tested between 1950 and 1960. Part A continues the listing of compounds and the discussion of their structure and activity. Part B gives results of barrier tests with the compounds found active in Part A. Appendix I lists the Federal laboratories and private companies that supplied the compounds tested. Most were either submitted or solicited for testing because they showed preliminary indications of biological activity; 261 were synthesized as possible repellents by the Patuxent Wildlife Research Center. Finally, Appendix II serves as an index, listing each compound by its code number, the page or pages on which it appears in Table I, and the Wiswesser line notation (WLN) describing its chemical structure in a unique one-dimensional cipher suitable for indexing and computer processing.

PART A - FOOD ACCEPTANCE TESTS

EXPERIMENTAL METHODS

The compounds were tested at the Patuxent Wildlife Research Center by the food acceptance method summarized by Bellack *et al.* (1) and described in detail by Bellack and DeWitt (2). Since the former publication has been out of print for several years, the food acceptance test method is again summarized here for convenience:

For each compound, three individually caged laboratory rats were given two food cups, one containing 20 g of a standard laboratory diet, and the other containing 20 g of the same food to which 400 mg of the test material had been added. Water was supplied ad libitum, and the food consumption was determined daily during the test period of 4 days. On the fifth day, all test animals were killed. At the close of the experiment, the degree of repellency of the test material, expressed as the index number K, was calculated by the formula:

$$K = 100 - \frac{1}{100W} (8T_1 + 4T_2 + 2T_3 + T_4)(U_1 + U_2 + 2U_3 + 4U_4 + 8X)$$

where:

W = the body weight of the animal (in kilograms),  
T<sub>1</sub> .... T<sub>4</sub> = the consumption (in grams) of the treated food  
on the first through the fourth day of the test,  
U<sub>1</sub> .... U<sub>4</sub> = the consumption (in grams) of the untreated  
food, and  
X = the amount (in grams) of untreated food  
remaining at the conclusion of the experiment.

## RESULTS AND DISCUSSION

Table I

Table I lists the sample code number, the chemical name, and the K value for more than 4,600 compounds appraised as rat repellents by the food acceptance test. Identified compounds are named according to the system used by Chemical Abstracts (3). Manufacturers' specialty products of questionable structure or unknown composition are listed according to the trivial, trade, or catalog name assigned by the supplier. Where different suppliers have assigned ambiguous or diverse chemical names to the same compound, a single name consistent with standard nomenclature rules has been derived for listing in the table. Compounds have not been renamed for cross-referencing. For example, the cyclic anhydrides of maleic and phthalic acids are listed under "ACID ANHYDRIDES" as maleic and phthalic anhydrides. These names are retained for placing them under "HETERO CYCLIC COMPOUNDS, Oxygen" and not renamed as the ring structures 2,5-furandione and 1,3-isobenzofuranone.

In addition to 60 conventional indexing headings corresponding to the functional groups in the molecule, Table I includes more than 15 headings representing special-interest compounds, such as carbamates, nicotine and derivatives, thiurams, etc. These have been added to accommodate the large numbers of compounds produced when the screening

laboratory was actively appraising candidate repellent compounds and the manufacturers were seeking multiple uses for compounds they had developed as pesticides. Thus, the pyrrolidiniums, ring structures containing a pentavalent nitrogen atom, are listed under "HETEROCYCLIC COMPOUNDS, Nitrogen" and "QUATERNARY NITROGEN COMPOUNDS, Heterocyclic Compounds", and are also included under "NICOTINE DERIVATIVES".

In Table I, a K value of 85 or greater is underscored, indicating that the compound was considered promising and was further evaluated by the same test but at concentrations of 1 percent or 0.5 percent. When the K value continued at 85 or greater in these concentration-effect bioassays, the compound was considered a candidate for the barrier test; all compounds tested by the barrier test are marked with an asterisk following the sample code number and are reported in Part B. A "T" in the "K Value" column indicates that the compound was toxic, i.e., that one or more of the test animals died during the test.

Several cautions should be observed in interpreting the data from this type of bioassay. First, because it was intended only for initial screening of large numbers of compounds, the number of test animals was small, the test period was short, only one bait concentration was used for the initial bioassay, and no attempt was made to allow for such confounding factors as position effects. Thus, the K values in Table I can be considered as within the normal range of rat behavior toward given compounds, but not as representing the mean of such behavior. Second, unless rats died during the 4-day test period, there was no way to determine if a test compound was toxic. Because bait avoidance is a common result of sublethal intoxication, some high K values probably represent, not "true" repellents, but poorly accepted toxicants. Finally, it should be remembered that the compounds tested represent only a small fraction of the functional group combinations or configurations possible in organic compounds. Although a comparison of repellency among groups can provide useful guidelines for further work, it is valid only within the limits of the compounds and the concentrations tested.

Table II

Table II presents an "activity index", called a Functional Group Repellency Index, derived from the K values of the compounds listed under the various functional group headings in Table I. With this listing, not discrete compounds, but functions (an atom, a group of atoms, or a unique spatial configuration) can be examined for their influence on food consumption.

The Functional Group Repellency Index was calculated from the following formula:

$$\text{Repellency Index} = \frac{AB}{CD}$$

where:

- A = the number of chemicals in a group with K values greater than 84,
- B = the mean K value for the group,
- C = the coefficient of variation of the K values, and
- D = the constant 12 (the mean number of chemicals with K values greater than 84 in groups in which more than 10 chemicals were tested).

D is included as a weighting factor, so that a group in which, say, four out of five chemicals tested had K values greater than 84 does not get more weight than groups in which 16 out of 20 chemicals tested had K values greater than 84.

Entries in the columns headed "Functional Group" and "Substituent" follow the same classification scheme and permutations of group titles used in Table I. The number of compounds tested in each functional group and their mean K value are listed in the columns headed "No. Tested" and " $\bar{K}$ ". The "CV" column lists the coefficient of variation of the K values ( $CV = \text{standard deviation} \div \bar{K}$ , represented as a percentage). The CV is included as a means of comparing the amount of variation in K values within groups. (K values in Table I ranged from -279 to 100, but the range was small within some groups, large within others.) The calculated Functional Group Repellency Index is entered under the "Repellency Index" column. A value of 99.99 in this column is a dummy value generated by the computer when the CV was zero; it is not an indication of high activity.

There are 621 groups listed in the "Functional Group" column; 206 of these are combinations produced by the permutation of all index and special-interest functions, and 415 are specific functional headings (unsubstituted, mixed, mono-, di-, or poly-substituted). Of the 621, 122 have a Repellency Index value of zero, and 182 have values between 0.01 and 1.00. The remaining 121, which have values ranging from 1.00 to 26.90, are considered as those groups or combinations of groups that are relatively active as rodent repellents.

The 10 headings with the largest Repellency Index values were as follows: Heterocyclic Compounds, Nitrogen, 26.90; Amide-Heterocyclic-Nitro Compounds, 24.00; Phenol-Thiocyanate Compounds, 21.78; Quaternary Nitrogen, Ammonium Compounds, 17.89; Primary Amine Compounds, 13.10; Thiourea Compounds, 12.26; Halide-Thiourea Compounds, 11.98; Alcohol-Halide-Quaternary Nitrogen Compounds, 11.90; Nicotine Derivatives, 11.40; Halide (Iodide) Compounds, 11.13.

This alignment suggests that the most active repellents are multi-membered cyclic compounds containing a nitrogen hetero atom, and points to other functional combinations that contribute to repellency. However, the ranking results from comparing a variety of molecular types--those containing only single functions, as well as those containing multiple or mixed functions. Possibly a more useful ranking could be realized if compounds of only one function were rated against each other. However, there are only 41 headings in Table II listing compounds of simple, unsubstituted functions; the rest of the compounds belong to the more than 2,000,000 that contain multiple or mixed functional groups. If the level of repellency depends on the kinds--not merely the numbers--of functional groups in the molecule, then the activity of the functions must be examined separately. Those functions that confer high repellency--and the positive or negative synergistic effect that each imparts to any combination of functions--must be identified before one can systematically identify or synthesize compounds likely to be good repellents.

Although Table II does not present examples of all possible functional group combinations, the Repellency Index value for those that do appear can be sorted and averaged to give a mean Functional Group Repellency Index. For example, halides appear 31 times, as fluorides, chlorides, bromides, and iodides, for a total Repellency Index value of 146 and a mean of 4.71. When all functions in Table II are sorted in this manner, the 10 with the highest Repellency Index values are the following: Quaternary Nitrogen Compounds, 11.16; Thioureas, 8.76; Guanidines, 6.71; Nicotine and derivatives, 6.59; Phenols, 5.67; Imides, 5.31; Thiocyanates and Isothiocyanates, 5.08; all Heterocyclic Compounds, 4.86; Halides, 4.71; and Alcohols, 4.06. (It should be noted that some index compounds--benzothiazolium, imidazolium, isoquinolinium, etc.--are found under two headings, "Quaternary Nitrogen Compounds" and "All Heterocyclic Compounds".)

This ranking based on the presence of single functions may provide some insight into the relationship between repellent activity and chemical structure. Among the 10 highest-ranking functions, 2 contain the monovalent hydroxy group, 3 contain divalent sulfur, and 7 contain trivalent and pentavalent nitrogen. This suggests that a good starting point in synthesizing new repellents would be parent compounds containing a quaternary nitrogen in the nucleus. Many of the commercially available surfactants of the quaternary nitrogen type, such as the benzalkoniums, benzethoniums, cetylpyridiniums, and methylbenzethoniums, are established fungistatic and bacteriostatic agents that are also known to reduce food consumption. The imide function and tributyltin fragments also exhibit both biostatic and rodent repellent action. More of these types of compounds should be investigated as rodent repellents.

The search for effective repellents should entail testing or synthesizing compounds containing these high-ranking functional groups.

In most cases, there was not enough information to suggest which configurations within these functions might provide the best repellents. For example, there were active thioureas of both the chain and cyclic types. However, monofunctional guanidine compounds with any or all of the hydrogens on the nitrogens replaced at the 1- and 3- positions with hydrocarbon radicals appeared to be better repellents than either the N-substituted derivatives or ring structures with nitrogen in the 1-, 3-, and/or 4- position. The presence of halides appeared to increase the repellency of other functional configurations; there may be some correlation between the increased solubility of most halogenated compounds and their ability to influence taste and smell. However, it is also possible that some of the halides with high K values were actually poorly accepted toxicants. Some bridged chlorinated hydrocarbons, as well as many organophosphates, are recognized as compounds of this type. Toxic compounds are not promising nuclei to consider in synthesizing repellents because there is usually a small margin of safety between repellent and toxic concentrations.

This discussion of the 10 highest-ranking functions does not mean to imply that other functions cannot provide good repellents. Two of the more effective compounds discovered in this study, trinitrobenzene-aniline complex and beta-nitrostyrene (BNS), are hydrocarbon radicals carrying nitro substituents. The primary, secondary, and tertiary amines, along with some of their salts or addition products, and the esters of carbamic acid and its sulfur analogs, were also effective repellents. In general, however, most of the functions not listed can be considered to be relatively inactive as repellents. Although acid anhydrides, aldehydes, carboxylic acids, esters, ethers, ketones, and lactones are chemically reactive, none acted as rodent repellents at the concentration used.

Except for the alcohols and phenols, there were relatively few effective groups that did not contain some elements besides carbon, hydrogen, and oxygen. It is also apparent from the ranking that repellency does not depend on the identity of a molecule's hydrocarbon radical. In fact, many examples may be located in which activity is apparently enhanced or depressed by the same hydrocarbon radical. We have made no attempt to relate repellency to carbon chain lengths or isomers, aromatic or alicyclic configurations, extent of saturation or location of unsaturated bonds, or sites of substituents. This kind of analysis would undoubtedly suggest further guidelines for predicting activity. For example, there were indications that repellency increases as the carbon chain length increases from 4 carbons through 12 carbons, and that the addition of aryl radicals reduces the repellency of some groups.

Our conclusions from the data in this report that certain chemical functional groups tend to be associated with rodent repellency were substantiated by the barrier tests (Part B) and by other subsequent investigations at the Denver Wildlife Research Center.

#### PART B - BARRIER TESTS

Although the food acceptance test described in Part A was a simple and economical method of screening large numbers of compounds for repellent activity, a high K value when a compound was mixed with food did not necessarily indicate that the compound would be useful as a repellent for packaging materials. To evaluate this, a barrier test bioassay was developed at the Denver Wildlife Research Center (J. F. Besser and J. R. Tigner, personal communication).

Altogether 123 compounds were tested by the barrier test. Most were drawn from the 699 compounds that had K values of 85 or more at 2, 1, and 0.5 percent in the food acceptance test (Table I). A few had lower K values but were of special interest because of low cost, unique structure, or close relationship with other active compounds. The rest of the 699 active compounds from Table I were not tested because the supplier withdrew them; they decomposed with storage; formulations suitable for applying them to burlap could not be developed; or they were too toxic or irritating to handle safely.

#### EXPERIMENTAL METHODS

Candidate compounds were tested on 4- x 4-inch food bags made from standard 8-oz burlap fabric. Burlap was selected because it readily absorbs many polar and nonpolar solvents, and rodents readily learn to penetrate it.

The house mouse (Mus musculus) was used for testing because it causes extensive damage to food packaging materials; is sensitive to repellents; and is ubiquitous, easily trapped, and docile in cages. A few compounds were also tested with wild Norway rats (Rattus norvegicus) for comparison. Test rodents were caged individually in 60-cage bioassay racks and replaced with new animals as needed. Mice were either wild-trapped or drawn from a colony started from wild-trapped mice; all rats were wild-trapped.

Test compounds were dissolved or suspended in what appeared the most suitable carriers for application to burlap. No attempt was made to systematically test series of formulations for given compounds. The chemical and physical properties of most compounds did not permit formulating

them in a variety of carriers, or even always achieving standard concentrations. The objective of the barrier tests was simply to determine the best compounds formulated with the most suitable carriers that would provide the maximum protection for the longest time.

When a suitable carrier was chosen, the amount of it that was absorbed when an empty bag was saturated and run through a wringer was determined so that the amount of test compound needed to produce the desired concentration (usually 5 mg/in.<sup>2</sup> for mice, 10 mg/in.<sup>2</sup> for rats) could be calculated. The appropriate amount of the compound was then dissolved or suspended in the carrier, and test bags were saturated with the formulation, run through the wringer, air-dried at room temperature, and tested within a few days. When formulations contained products such as Methocel that would stiffen the burlap, treated bags were paired for testing with "untreated" bags that had been treated with the carrier and processed like treated bags. When the carrier was a volatile organic solvent, treated bags were paired with untreated bags that had not been processed.

For each barrier test, a treated and an untreated bag were filled with the rodents' standard diet (a mixture of commercial fox chow and oatmeal for mice, commercial rat pellets for rats), stapled closed, and placed overnight (16-18 hr) in an individual rodent's cage. In tests with mice, bags were placed in 50 cages the first night; with rats, in 25 cages. A test was not considered completed unless the rodent penetrated at least one bag (cut a hole large enough to obtain food); healthy animals always cut one or both bags overnight. Tests were repeated as needed the following nights (with the same or different animals, at random) until 50 animal-nights had been accumulated for the test formulation. Each morning, a count was made of the treated and untreated bags cut. After 50 animal-nights, the protection afforded by the test formulation was calculated by the formula:

$$\text{Percent damage reduction} = 100 \times \frac{U - T}{U + T}$$

where:

U = number of untreated bags cut, and  
T = number of treated bags cut.

If a test formulation reduced damage by at least 50 percent, or the compound was of special interest, continued storage tests were usually run. In these cases, all uncut bags were emptied, placed in kraft paper sacks, stored in metal cabinets at room temperature, and retested one to four times, at 2 weeks to 2 years after the original test. For retesting,

treated bags were again paired with untreated bags--fresh unprocessed ones when the original formulation had contained only a volatile organic solvent, processed ones prepared along with the treated bags in all other cases (extra "untreated" bags were made for most of these test series). Again, the bags were filled with food, stapled closed, and offered to individually caged rodents overnight until either 50 animal-nights had been accumulated or too many bags had been cut to permit continued testing.

#### RESULTS AND DISCUSSION

Table III summarizes the results with the 123 compounds appraised for repellency to rodents by the barrier test. Compounds are listed sequentially by code number (see Appendix II for their chemical names and the page number on which they appear in Table I). The columns under "Barrier Treatment" give the concentration of the test compound, in milligrams per square inch on the treated bag, and a letter code for the carrier used in the formulations; these codes are explained at the end of the table. The remaining columns indicate the test rodent and the percent protection (= percent damage reduction) in the initial test and any continued storage tests.

The 123 compounds, in 144 formulations, were used in 149 initial tests (139 with mice and 10 with rats). In these tests 62 compounds (50 percent), in 70 formulations, were effective (provided protection of 50 percent or more). Fifty-five of these compounds (63 formulations), plus two special-interest compounds that had provided somewhat lower protection than 50 percent, were tested in one or more storage tests--a few at 2-6 weeks, most at 2-3 and 6-8 months, and a few at 1-2 years.

At 2 or 3 months, 32 of 51 compounds (60 percent) tested against mice were still effective, as were 2 of 4 tested against rats. At 6 months, 17 of 40 compounds (43 percent) were still effective against mice; neither of the 2 tested against rats were, and no further rat tests were conducted. Of the 17 compounds active enough to be tested at 1 or 2 years, 8 (47 percent) were still effective. Thus, about half the compounds were eliminated at each step in the testing procedure.

Several groups of compounds with related structures performed similarly in the initial and storage tests; compounds 5858 and 5859 and compounds 6738 and 6559 are examples. There were other series in which related compounds performed differently. For example, 4041 and 7154 are, respectively, oxygen and sulfur ring analogs of beta-nitrostyrene (BNS), one of the most effective repellents found in the food acceptance tests (Part A); both were less than 50 percent effective at 6 months, while 7147, a third compound containing the beta-nitrostyrene fragment, failed

the initial test but was effective at 6 months. Other examples of related compounds that showed differences in activity are compounds 4337, 4735, and 5601, and compounds 5625 and 5626.

Although too few compounds were evaluated by the barrier test to permit many conclusions about the relationship between chemical structure and effectiveness in repelling rodents, examination of the structure of effective compounds suggested certain patterns. The defined functional groups (two compounds were unspecified mixtures) and the number of times the groups occurred, alone or in combination, in the compounds that were effective in storage tests were as follows:

<u>Functional group</u>	No. times represented in compounds effective at:		
	<u>2-3 mos.</u>	<u>6 mos.</u>	<u>1 yr.</u>
Heterocyclic nitrogen	7	5	2
Amine	5	5	2
Thiourea	3	3	1
Amide	2	3	1
Nitrile	3	2	1
Ether	2	2	1
Halide	2	2	1
Carboxylic acid	1	2	1
Quaternary nitrogen	2	1	1
Alcohol	3	2	
Tin	3	2	
Nitro	2	2	
Thiocyanate	3	1	
Sulfide	2	1	
Thiocarbamate	2	1	
Lactam	1	1	
Heterocyclic nitrogen and sulfur		1	
Imide	3		
Ester	2		
Hydrazine	2		
Heterocyclic nitrogen and oxygen	1		
Heterocyclic oxygen	1		

Thus, all but seven of the compounds effective at 2-3 months, all but four of those effective at 6 months, and all but one of those effective at 1 year contained nitrogen in the molecule; many of the exceptions were tin complexes. In Part A, nearly all of the active compounds also had functional groups containing nitrogen. Of the compounds effective in any storage test, none contained more than three functional groups on

the molecule. This suggests that, beyond a certain point, adding active substituents reduces rather than increases biological activity; evidently, additional groups inhibit action by shielding, antagonism, or irreversible action on the activity site responsible for the original effect.

The results of the food acceptance and barrier tests led to a few commercially successful rodent repellents. In the early 1950's, a liquid formulation of BNS was marketed to prevent porcupines and beavers from damaging trees and wood products (U.S. Patents 2,335,384; 2,537,018; 2,795,555; 2,798,062). However, since BNS has a relatively high vapor pressure, this formulation evaporated too rapidly during warm weather to provide lasting protection. An attempt was made to formulate BNS for year-round application by microencapsulating BNS droplets in an epoxy complex and mixing it in a fast-drying adhesive to be sprayed on a surface. In theory, animals that attempted to gnaw through the film would rupture the capsules and release enough BNS to repel them. However, techniques for microencapsulating volatile compounds were not well developed at that time, and the epoxy coating did not retain the BNS.

Perhaps the most effective repellents found in these tests were a group of 41 tin compounds that were effective in initial barrier tests and storage tests up to 1 and 2 years. Unfortunately, their identities have not been released by the manufacturer and they could not be included in this publication. Nevertheless, the results with them clearly showed the potential of tetravalent tin complexes as repellents, and several patents were granted for stannous and stannic compounds to reduce rodent penetration of several barrier materials (U.S. Patents 3,167,473; 3,309,369; 3,389,048; 3,461,132; 3,480,712; 3,530,157; British Patent 1,268,222). In addition, a formulation of tributyltin chloride in a plasticized rubber matrix (4) was developed with U. S. Army funds and is now being used by the Army Electronics Command to protect electronic cables from rodent penetration.

Obviously, the food acceptance and barrier tests evaluated only a few of the compounds and functional groups that might be effective as rodent repellents. The test results were intended primarily as a source of data for discriminating searches to locate repellents offering a compromise between economy of production, ease of formulation, safety in handling, and effectiveness. Except for the organotin complexes mentioned above, few usable repellents were found as a direct result of this program, but this appears to have been chiefly a result of formulation problems. With recent developments in microencapsulation, time-release coatings, and multiwall laminates, it now appears profitable to reevaluate the potential of compounds found effective in these tests. Considerable attention is being directed toward ways to precisely control the release of volatile chemicals;

protect photoreactive, thermolabile, and hydrophobic compounds from degrading; and control the reactions of compounds within specific environments. Therefore, techniques should soon be available by which volatile compounds such as BNS, some tin complexes, and other highly effective but unstable chemicals reported here, can be formulated as practical rodent repellents.

#### ACKNOWLEDGMENTS

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We are also grateful to Denver Wildlife Research Center staff members Ann H. Jones for her capable editing of the manuscript, John L. Oldemeyer for his expertise in the statistical treatment of the data, and June V. Fenton for her exceptional interest, initiative, and perseverance in typing the tables.

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TABLE I

## REPELLENCY OF COMPOUNDS TO RATS

Code No.	Classification and Name	K Value
ACID ANHYDRIDES		
Unsubstituted		
3397	d-Camphoric anhydride	42
3403	Cinnamic anhydride	-42
4710, 6006	4-Cyclohexene-1,2-dicarboxylic anhydride	31, 57
3337	Glutaric anhydride, $\beta,\beta$ -dimethyl-	25
3247	1,3-Isochromandione	24
6982	Succinic anhydride, $\alpha$ -dodecanyl-	64
Substituted		
5941	Bicyclo[2.2.1]hept-5-ene-2-acetic acid, 2-carboxy-1,4,5,6,7,7-hexachloro-, cyclic anhydride	46
5339	Cyclohexane-1,2-dicarboxylic anhydride, 4,5-dichloro-3,6-endoxy-	48
3911	2-Cyclohexene-1,2-dicarboxylic anhydride, 5-acetyl-3-carboxymethyl-4,4,6-trihydroxy-6-methyl-, $\gamma$ -lactone	44
3378	Hemipic anhydride	-52
6787	Isatoic anhydride	36
3433	7-Oxabicyclo[2.2.1]hept-5-ene-2,3-dicarboxylic anhydride	
3745, 4013 5304	Phthalic anhydride, tetrachloro-	60, 74 84
6771	Succinic anhydride, p-methoxybenzyl-	-36
3246	Tartaric anhydride, diacetate	11
6797	-----, diacetyl-	37
ACID HALIDES		
5815	2-Furoyl chloride, 5-nitro-	<u>86</u>

TABLE I

Code No.	Classification and Name	K Value
ACIDS, CARBOXYLIC		
Unsubstituted		
	Monobasic	
3065	Acetic acid, nickel(II) salt, monohydrate	67
2875	phenylmercury(II) salt	100
3106	Butyric acid, nickel(II) salt	54
5401	1- $\alpha$ -Campholenic acid	44
3289	Caproic acid, $\alpha$ -ethyl-, nickel(II) salt	74
3282	Caprylic acid, nickel(II) salt	29
5498	-----, $\alpha$ -methyl-	26
3060	nickel(II) salt	42
5897	sodium salt	-8
5901	Cinnamic acid, p-isopropyl-	70
5899	trans-Cinnamic acid	-14
3250	Cumic acid	26
3578	copper(II) salt	85
2830	Cyclohexaneacetic acid	38
3279	x-Cyclohexanecutyric acid, nickel(II) salt	-4
3280	x-Cyclohexanecaproic acid, nickel(II) salt	21
3288	x-Cyclohexanepropionic acid, nickel(I) salt	31
5352	x-(4-Cyclopentylnaphthalene-1)butyric acid	70
3405	Erucic acid	-70
3290	9-Hendecenoic acid, nickel(II) salt	-4
4099	10-Hendecenoic acid, sodium salt	50
6438	Isodextropimamic acid	33
3283	Linoleic acid, nickel(II) salt	41
2834	2-Norpinaneacetic acid, 6,6-dimethyl-	77
4159	2,4-Pentadienoic acid, silver salt	60
3131	Propiolic acid, phenyl-	57
3285	Valeric acid, nickel(II) salt	51
	Polybasic	
4172	Bicyclo[2.2.2]octane-2,3-dicarboxylic acid, 5,5-dimethyl-1,8-diphenyl-	82
3253	3,3'-Biphenyldicarboxylic acid	51
3400	Brassylic acid	23
3398	d-Camphoric acid	40
5168	1,3-Cyclobutanediacetic acid, 1-2,2-dimethyl-	62
5526	9-Decenoic acid, 9-[4-butyl-4(or 5)-carboxy- 2-cyclohexen-1-yl]-	20
6007	-----, 10[4-butyl-4(and 6)-carboxy-2-cyclohex- en-1-yl]-, from $\alpha$ -eleosteric acid	19

TABLE I

Code No.	Classification and Name	K Value
ACIDS, CARBOXYLIC		
Unsubstituted		
	Polybasic	
5937	Diphenic acid	14
3284	Fumaric acid, nickel(II) salt, pentahydrate	20
4010	Mesaconic acid	31
2757	Oxalic acid, copper(II) hydrogen salt, salt with 1 f. wt. sodium oxalate, dihydrate	
2758	diamminecopper(II) salt	80
3627	Phthalic acid, copper(II) salt	90
2756	diamminecopper(II) salt	73
3068	nickel(II) salt	72
4500*	phenylmercury(II) salt	75
3907	zinc salt	35
4104	Pinic acid	24
6352	Pyromellitic acid, tetrakis(2-ethylhexyl- ammonium) salt	-80
3000	Succinic acid, diamminecopper(II) salt	80
3071	nickel(II) salt	76
3334	Trimesic acid	-44
Monosubstituted		
	Alcohols	
3281	Citric acid, nickel(II) salt	24
4497	Gluconic acid, phenylmercury(II) salt	85
3069	Lactic acid, nickel(II) salt	76
4499	phenylmercury(II) salt	100
4100	Ricinoleic acid, calcium salt	26
4101	sodium salt	38
5125	Tartaric acid, dodecylammonium hydrogen salt	85
3336	Tartronic acid	8
	Amides	
4803	Acrylic acid, 2-acetamido-, ammonium salt	48
4756	Anthranilic acid, N-butyryl-	64
4363	-----, N,N'-oxaryl, di-	63
2953	Citraconanilic acid, p-methyl-	73
3442	Hexanoic acid, $\epsilon$ -benzamido-	79
6750	Maleamic acid, N-isopropyl-	61
5136	-----, N-methyl-	54
6751	-----, N-phenyl-	60

TABLE I

Code No.	Classification and Name	K Value
ACIDS, CARBOXYLIC		
Monosubstituted		
Amides		
2964	Maleanilic acid, <u>p</u> -methyl-	63
4016	Oxanilic acid	46
5511	Phenaceturic acid	49
3740	Phthalamic acid, N-dodecyl-	31
6353	-----, <u>N</u> -isopropyl-, copper(II) salt	72
5533	-----, <u>N</u> -1-naphthyl-	65
5816	-----, <u>N</u> -2-naphthyl-	86
4678	Stearic acid, $\theta$ -acetamido-	13
Amines		
4495	Acetic acid, <u>p</u> -aminophenylmercury(II) salt	100
3348	-----, (ethylenediamine)tetra-, disodium salt, dihydrate	-34
3349	-----, trisodium salt, monohydrate	-115
5753	-----, 1-phenyliminodi-	55
3093	Anthranilic acid, nickel(II) salt	26
3516	Glycine, <u>N</u> -cyclohexyl-	47
4839	2-Naphthoic acid, 3-amino-, hydrochloride	81
3264	Octanoic acid, 2-amino-	47
Esters		
6493	Itaconic acid, $\beta$ -monoallyl ester	100
6389	Phthalic acid, monobutyl ester, copper(II) salt	67
6388	Succinic acid, $\alpha$ -dodecenyl-, monobutyl ester	84
Ethers		
4540	Acetic acid, [ $\omega$ -(1-butenyl)phenoxy]-	95
3399	-----, 2,3-dimethoxytetramethylenebis-, mercury(II) salt	100
6816	2-Biphenylcarboxylic acid, 2'-methoxy-	37
6360	Cinnamic acid, 3,4-dimethoxy-	42
5492	-----, 4-methoxy-	-36
5502	-----, 2-methoxy- $\alpha$ -methyl-	47
5163	Propionic acid, 2-benzoyloxy-	72
3380	-----, 2-( <u>p</u> -tert-butylphenoxy)-	81
2831	-----, 2-phenoxy-	61
3335	Veratric acid	20

TABLE I

Code No.	Classification and Name	K Value
ACIDS, CARBOXYLIC		
Monosubstituted		
Halides		
3997	Acetic acid, p-chlorophenyl-	34
5437	Acrylic acid, $\alpha,\beta$ -dichloro-	98
3572	-----, perchloro-, sodium salt	77
3990	Adipic acid, perfluoro-	-10
2847	1-Apobornaneacetic acid, 2-chloro-	14
3620	Benzoic acid, o-chloro-, bismuth(III) salt	-44
3621	copper(II) salt	43
3080	nickel(II) salt	15
3081	-----, p-chloro-, nickel(II) salt	38
3292	-----, 3,4-dichloro-, nickel(II) salt	52
3313	Crotonic acid, $\alpha,\beta$ -dichloro- $\gamma,\gamma$ -diphenyl-	92
3604	Hydrocinnamic acid, $\alpha,\beta$ -dibromo-	55
3409	$\beta$ -Isodurylic acid, 3-bromo-	62
5839	Maleic acid, dichloro-	30
4933	Phthalic acid, 4-chloro-	69
4001	-----, perchloro-	63
3988	Succinic acid, perfluoro-	9
Heterocyclic Compounds		
3628, 5316 5775	Acrylic acid, $\beta$ -2-furyl-	-30, 51 52
3928	-----, $\beta$ -2-thienyl-	-58
2855	Butyric acid, 3-indolyl-	63
3136	Coumarilic acid	77
6830	Crotonic acid, 2-furyl-	67
4161	Homopiperonylic acid	41
4163	Hydrocinnamic acid, 3,4-methylenedioxy-	11
5777	Malonic acid, furfurylidene-	53
7265	-----, 3-indolylmethyl-	20
6279	Octadecanoic acid, 9,10,12,13-diepoxy-	-17
7038	9-Propionic acid, 3,6-di- <u>tert</u> -butylcarbazole	62
2854	Propionic acid, 3-indolyl-	71
Imides		
2935	Acetic acid, (1,4-methano-1,2,3,4-tetrahydro-phthalimido)-	67
5979	Butyric acid, 4-phthalimido-	83
6449	Levopimaric acid, addition product with <u>N</u> -phenylmaleimide	-42

TABLE I

Code No.	Classification and Name	K Value
ACIDS, CARBOXYLIC		
Monosubstituted		
Iodonium Compounds		
Iodonium compounds.		
3430	bis(carboxymethylphenyl)---- iodide	-8
3543	bis(carboxyphenyl)---- iodide	72
Ketones		
3638	Acrylic acid, <u>trans</u> -β-benzoyl-	79
3402	Benzoic acid, <u>o</u> -(β-isodurylyl)-	38
5405	Elaidic acid, 12-oxo-	34
3286	Levulinic acid, nickel(II) salt	12
5407	Octadecanoic acid, 9,12-dioxo-	20
5406	10-Octadecenoic acid, 12-oxo-	41
5403	-----, 9,12-dioxo-	20
5402	9-Octadecenoic acid, 12-oxo-	54
4103	Pinonic acid	53
2903	Propionic acid, β-(β-isodurylyl)-	27
Lactams		
4017	Acetic acid, (3,6-dioxo-2-phenyl-1,2,3,6-tetrahydro- hydropyridazin-4-yl)-	-5
5556	2H-1,4-Benzothiazine-2,2-diacetic acid, 3,4-di- hydro-3-oxo-	29
6700	Pyroglutamic acid, 3-pentyl-4-phenyl-	74
Nitro Compounds		
3350	Cinnamic acid, <u>m</u> -nitro-	31
5513	-----, <u>o</u> (and <u>p</u> )-nitro-	81
3938	Heptanedioic acid, 4,4-dinitro-	-10
3347	Phthalic acid, 3-nitro-	48
Phenols		
3423	2-Anthroic acid, 3-hydroxy-	47
6367	Benzoic acid, x,x,x-trihydroxy-	46
4461	2,3-Cresotic acid, 5,5'-methylenedi-	93
3287	Gentisic acid, magnesium salt	21
6369	Isophthalic acid, 2,4,5-trihydroxy-	67
3245	Phthalic acid, 3-hydroxy-	9
3067	Salicylic acid, nickel(II) salt	65
5351	silver salt	67
2835	-----, 3-phenyl-	31
2836	-----, 5-phenyl-	87
6772	Succinic acid, 4-hydroxybenzyl-	28

TABLE I

Code No.	Classification and Name	K Value
ACIDS, CARBOXYLIC		
Monosubstituted		
	Thiocarbamates	
5445	Acetic acid, ( <u>N,N</u> -diethyldithiocarbamoyl)-	80
3655	-----, [(1-piperidyl)carbodithio]-	83
	Thioureas	
5258	Acetic acid, (2-imino-4-oxo-5-thiazolidinyl)-	75
3639	-----, (5-pseudothiophydantoinyl)-	45
3850	salt with cyclohexylamine	78
3849	salt with dicyclohexylamine	83
3848	salt with hexadecylamine	58
3468	sodium salt	5
	Ureas	
6752	Maleamic acid, <u>N</u> -carbamoyl-	53
5012	5-Pyrimidinecarboxylic acid, 1,2,3,4-tetrahydro-2,4-dioxo-, monohydrate	33
	Miscellaneous	
5508	Acetic acid, di-, trithiocarbonate ester	80
3401	1-Anthraquinonecarboxylic acid	30
4938*	Butyric acid, 4-cyano-2,2-dimethyl-	96
5337	-----, 4,4'-(trimethylenedisulfonyl)di-	10
5169	Heptanedioic acid, 3-(1-hydroxy-1-methylethyl)-,	
	γ-lactone	55
4921	Hexanoic acid, 2-phenylhydrazido-	96
	Morpholinium compounds.	
6544	4-(2-carboxyethyl)-4-x-octadecenyl----- betaine	5
5187	Pinonic acid, azine	96
	Disubstituted	
	Amide-Halides	
3451	Caproic acid, ε-benzamido-α-bromo-	85
5485	Malcanilic acid, 3-chloro-	80
7094	Phthalamic acid, <u>N</u> -(3,4-dichlorophenyl)-	91
	Amide-Heterocyclic Compounds	
5880	7-Oxabicyclo[2.2.1]heptane-2-carboxylic acid,	83
	3-(1-naphthylcarbamoyl)-	
5944	-----, 3-(4H-1,2,4-triazol-3-ylcarbamoyl)-	58
	Amide-Nitro Compounds	
2759	L-Glutamic acid, <u>N</u> -(m-nitrobenzoyl)-	41
5531	Phthalanilic acid, 2'-nitro-	25
5532	-----, 4'-nitro-	55

TABLE I

Code No.	Classification and Name	K Value
ACIDS, CARBOXYLIC		
Disubstituted		
Ether-Halides		
3325	Acetic acid, (4-chloro-o-tolyloxy)-	89
3291	-----, (2,4-dichlorophenoxy)-, nickel(II) salt	42
3029	-----, (pentachlorophenoxy)-	97
5010	-----, (2,3,5,6-tetrachlorophenoxy)-	88
4189	Propionic acid, $\alpha$ -(o-chlorophenoxy)-	19
Halide-Heterocyclic Compounds		
4965, 5782	2-Furoic acid, 5-bromo-	83, 93
4966, 5783	-----, 5-chloro-	90, 95
7167	-----, 3,4-dichloro-	86
7264	Nicotinic acid, 5-fluoro-	34
Halide-Phenols		
4191, 4322	Salicylic acid, 5-bromo-	93, 90
4463	-----, 5-chloro-	100
4462	-----, 3,5-dichloro-	98
Heterocyclic-Ketones		
5408	Octadecenoic acid, 10,11-epoxy-12-oxo-	74
5404	-----, 10,11-epoxy-9,12-dioxo-	22
Miscellaneous		
7263	Acetic acid, [o-(N-allylcarbamoyl)phenoxy]-	-14
3047	-----, [(2-benzothiazolyl)thio]-	90
3132	Anthranilic acid, 3,5-dichloro-	56
2909	Benzoic acid, o-(p-bromobenzoyl)-	76
4320	-----, o-(p-hydroxybenzoyl)-	2
4002	-----, 4-nitro-2-sulfo-, potassium(sulfonate) salt	16
5754	Butyric acid, 4-(2-formamidoethylsulfonyl)-	27
5525	Cinnamic acid, 4-acetoxy-3-methoxy-	31
6262	-----, p-chloro- $\alpha$ -cyano-	60
4488	2,5-Cresotic acid, $\alpha$ -thiocyanato-	31
6760	Fumaramic acid, N-formyl-	64
5784	2-Furoic acid, 5-nitro-	84
4492	Isonicotinic acid, 2,6-dihydroxy-	49
5516	Malonic acid, (2-phenylacetamido)-, monoethyl ester, sodium salt	45
3784, 3909	Mucochloric acid	76, 65
3635	-----, thiosemicarbazone	68
2978	2-Naphthoic acid, $\beta$ -hydroxy-7-sulfo-	69
5409	Octadecanoic acid, 10,11-dihydroxy-9,12-dioxo-	60
3338	Opianic acid	35

TABLE I

Code No.	Classification and Name	K Value
ACIDS, CARBOXYLIC		
Disubstituted		
Miscellaneous		
6315	Phthalanilic acid, 4'-(acetylsulfamoyl)-, dihydrate	21
3645	-----, 4'-(2-thiazolylsulfamoyl)-	24
6014	Pyruvic acid, (o-nitrophenyl)-	51
5534	γ-Resorcylic acid, 4-amino-, hydrogensulfate	64
5521	Valine, N-acetyl-3-mercaptop-	34
Polysubstituted		
5117	Acetic acid, [(2-amino-5-ethoxyphenyl)thio]-	81
5258	-----, (2-imino-4-oxo-5-thiazolidinyl)-	-5
7224	Anthranilic acid, 4-chloro-N-(p-methoxyphenyl)-	69
3152	Benzoic acid, 6-benzoyl-3-chloro-2-nitro-	84
3413	-----, 2-hydroxymercuri-3-nitro-, γ-lactone	98
5801	DL-2-Furanserine	48
4333	Glycine, dimethyl-, [2-[2-[p-(1,1,3,3-tetramethylbutyl)phenoxy]ethoxy]ethyl]betaine	60
5454	Glycolic acid, [(4,5-dihydro-2-imidazolyl)thio]-, hydrochloride	48
4751*	2-Pyrazoline-3-carboxylic acid, 5-oxo-1-(o-sulfo-phenyl)-4-(o-sulfophenylazo)-, salt with 2 f. wt. dicyclohexylamine	100
5903	Pyruvic acid, (4-hydroxy-3-methoxyphenyl)-, oxime	27
5528	-----, (4-hydroxy-3-methoxyphenyl)-2-thio-	71
5996	3-Quinolinecarboxylic acid, 7-chloro-4-hydroxy-	59
6639	Succinanilic acid, 4'-[p-(2,5-dimethyl-1-pyrrolyl)-phenylsulfonyl]-	53
ALCOHOLS		
Unsubstituted		
6029	Bicyclo[3.1.1]hept-3-en-2-ol, d-cis-2,6,6-tri-methyl-	32
6030	-----, d-trans-2,6,6-trimethyl-	32
6364	3-Butyn-2-ol, 2-phenyl-	78
4867	Cedrol	65
5487	Cinnamyl alcohol	60
6365	Cyclohexanol, 4-tert-butyl-1-ethynyl-	56
3141	-----, 1-ethynyl-	36
6361	-----, 1,1'-ethynyleneedi-	47
3248	-----, 1-ethynyl-2-methyl-	8
2832	-----, cis(and trans)-2-isopropyl-	71
4194	-----, 2-phenyl-	24

TABLE I

Code No.	Classification and Name	K Value
ALCOHOLS		
Unsubstituted		
5227	5-Decyne-4,7-diol, 4,7-dimethyl-	59
5216	-----, 2,4,7,9-tetramethyl-	96
5503	1-Decyn-3-ol, 3-methyl-	66
5507	11-Docosyne-10,13-diol, 10,13-dimethyl-	80
2829	1,2-Ethanediol, phenyl-	-7
5505	8-Hexadecyne-7,10-diol, 7,10-dimethyl-	60
5219	3-Hexyne-2,5-diol, 2,5-dimethyl-	30
5504	-----, 2,5-diphenyl-	54
4321	4,7-Methanoindene-5(or 6)-methanol, <u>exo</u> -3a, 4,5,6,7,7a-hexahydro-6(or 5)-hydroxy-	39
3710	4,7-Methanoinden-5-ol, perhydro-	39
5493	Methanol, 4-biphenyldiphenyl-	29
5506	9-Octadecyne-8,11-diol, 8,11-dimethyl-	53
5499	3,5-Octadiyne-2,7-diol, 2,7-dimethyl-	98
5217, 5501	4-Octene-3,6-diol, 3,6-dimethyl-	60, 61
5500	6-Octen-3-ol, 3,6-dimethyl-	53
5491	4-Octyne-3,6-diol, 3,6-diisopropyl-2,7-dimethyl-	43
5495	1-Pentyn-3-ol, 3-ethyl-	18
4105	cis(?) -2-Pinanol	62
3340	2-Propanol, 1-iodomercuri-	97
5224	d-Sobrerol	58
5225	dL-Sobrerol	77
5226	L-Sobrerol	75
7112	1,1'-Spirobi(indane-5,6-diol), 3,3,3',3'-tetra- methyl-	58
5166	d-Verbenol	72
Monosubstituted		
Acids		
3281	Citric acid, nickel(II) salt	24
4497	Gluconic acid, phenylmercury(II) salt	85
3069	Lactic acid, nickel(II) salt	76
4499	phenylmercury(II) salt	100
4100	Ricinoleic acid, calcium salt	26
4101	sodium salt	38
5125	Tartaric acid, dodecylammonium hydrogen salt	85
3336	Tartronic acid	8

TABLE I

Code No.	Classification and Name	K Value
ALCOHOLS		
Monosubstituted		
Amides		
6444	Hexanamide, 2-ethyl-N-(2-hydroxypropyl)-	69
4570*	Lactamide, N- <u>tert</u> -butyl-	91
2999	-----, (2-hydroxy-1,1-dimethylethyl)-	34
4577	-----, N-isobornyl-	96
5134	Malonamide, N,N'-bis(2-hydroxyethyl)-	51
6786	Oleamide, N,N'-ethylenebis[2-hydroxy-	37
6783	-----, 12-hydroxy-N-(2-hydroxyethyl)-	68
3412	Oxamide, N,N'-bis(2-hydroxyethyl)-	1
4791	Propionamide, N- <u>tert</u> -butyl-2-hydroxy-	67
4792	-----, N-(1,1-diethylbutyl)-3-hydroxy-	82
6096	-----, N-(3-hydroxy-2,2-dimethylpropyl)-3-hydroxy- 2,2-dimethyl-	54
4793*	-----, 2-hydroxy-N-isobornyl-	97
4580	-----, 3-hydroxy-N-isobornyl-	79
6089	-----, 3-hydroxy-N-isopropyl-	50
4575*	-----, 3-hydroxy-N-(1,1,3,3-tetramethylbutyl)-	94
6784	Stearamide, N,N'-ethylenebis[2-hydroxy	-27
6782	-----, 12-hydroxy-N-(2-hydroxyethyl)-	8
6098	Terephthalamide, N,N'-bis(5-hydroxypentyl)-	-5
Amines		
6475	5-Acaphthenemethanol, $\alpha$ -(dipropylaminomethyl)-	92
6624	x-Apocupreneethanol, dihydrochloride	97
2838	Benzhydrol, 4,4'-bis(dimethylamino)-	81
3609	1-Butanol, 2-amino-	47
5154	2-Butanol, 4-tetradecylamino-	88
5155	salt with 1 f. wt. propionic acid	85
3158	Dodecylamine, N,N'-bis(2-hydroxyethyl)-, compound with 1 f. wt. boron trifluoride	73
3159	compound with 1/2 f. wt. boron trifluoride	93
3160	compound with 1/3 f. wt. boron trifluoride	82
2704	Ethanol, 2,2'-aminobis-, salt with 1 f. wt. fluosilicic acid	74
7258	-----, 2-(2-aminoethylamino)-, dihydrochloride	1
4800	-----, 2-[o(and p)-aminophenyl]-, hydrochloride	31
4312*	-----, 2-(N-butylaniline)-	92
123	-----, 2-(2-methyl-1-naphthylamino)-	98
5332	-----, 2,2'-(2,5-xylidino)bis-	47
6445*	4-Heptanol, 1-dimethylamino-5-ethyl-	86
6663	1-Naphthalenemethanol, $\alpha$ -( $\beta$ -dihexylaminopropyl)-	91
6539	-----, $\alpha$ -(2-dipentylaminooethyl)-, hydrochloride	95
6650	-----, $\alpha$ -(1-dipropylaminooethyl)-, hydrochloride	91

TABLE I

Code No.	Classification and Name	K Value
ALCOHOLS		
Monosubstituted		
Amines		
6447	4-Nonanol, 1-dimethylamino-6,8,8-trimethyl-	86
3164	Octylamine, N,N-bis(2-hydroxyethyl)-, compound with 1/3 f. wt. boron trifluoride	73
6469	9-Phenanthrenemethanol, $\alpha$ -(diisopentylamino- methyl)-1,2,3,4-tetrahydro-, hydrochloride	92
3296	Phenethyl alcohol, p-amino-	31
6366	1,3-Propanediol, 2-amino-2-methyl, salt with 1 f. wt. neoabietic acid	62
6088	1,2-Propanediol, 3-(N-allylanilino)-	70
4820	-----, 3,3'-(1-naphthylamino)bis-	38
2715	2-Propanol, 2,2'-aminobis-, salt with 1 f. wt. fluosilicic acid	85
4819	-----, 1,1'-anilinobis-	51
6060	-----, 1,3-bis(dimethylamine)-, dihydrochloride	56
2856	-----, 1-cyclohexylamino-	75
6629	3-Retenemethanol, $\alpha$ -(1-dibutylaminoethyl)-, hydrochloride	98
6630	-----, $\alpha$ -(1-dihexylaminoethyl)-, hydrochloride	77
6537	-----, $\alpha$ -(1-isohexylaminomethyl)-, hydrochloride	65
3161	Tetradecylamine, N,N-bis(2-hydroxyethyl)-, compound with 1 f. wt. boron trifluoride	78
3162	compound with 1/2 f. wt. boron trifluoride	90
3163	compound with 1/3 f. wt. boron trifluoride	85
Carbamates		
6811	Carbamic acid, 2-hydroxyethyl ester	-57
5017	2-hydroxypropyl ester	-3
6814	-----, benzyl-, 2-hydroxyethyl ester	58
5019	-----, bis(2-hydroxyethyl)-, 2-hydroxyethyl ester	39
5027, 6808	-----, dodecyl-, 2-hydroxyethyl ester	59, 64
5021	-----, ethylenedi-, bis(2-hydroxyethyl) ester	7
5183	-----, hexadecyl-, 1(or 2)-monoester with 1,2- propanediol	74
5755	-----, (3-hydroxy-2,2-dimethylpropyl)-, ethyl ester	45
5013	-----, 2-hydroxyethyl-, 2-hydroxyethyl ester	22
6802	2-hydroxypropyl ester	-17
5022	-----, isopentyl-, 2-hydroxyethyl ester	56
5030	-----, octadecyl-, 2-hydroxyethyl ester	50
Esters:		
6491	Citric acid, triallyl ester	81
4169	Hydrocinnamic acid, p-methyl-p-hydroxy-, ethyl ester	54
3275	Lactic acid, dodecyl ester	32

TABLE I

Code No.	Classification and Name	K Value
ALCOHOLS		
Monosubstituted		
Ethers		
7204	Benzyl alcohol, p-methoxy-	80
4474	Ethanol, 2-(2-biphenylyloxy)-	52
4709	-----, 2,2'-[isopropylidene bis(p-phenyleneoxy)]di-	59
3943	-----, 2-(x,x-xylyloxy)-	76
2837	1-Propanol, 3-(1-naphthyloxy)-	73
2839	2-Propanol, 1-(4-biphenylyloxy)-	-48
3381	-----, 1-(p-tert-butylphenoxy)-	59
3709	-----, 1-(p-cyclohexylphenoxy)-	39
Halides		
3083	9,10-Anthracenediol, 1-chloro-9,10-dihydro-9, 10-diphenyl-	42
3084	-----, 2-chloro-9,10-dihydro-9,10-diphenyl-	48
2848	1-Apobornaneethanol, 2-chloro-	69
5231	Benzyl alcohol, 2,4-dichloro-	63
5232	-----, 3,4-dichloro-	57
5939	1-Heptanol, 2,2,3,3,4,4,5,5,6,6,7,7-dodeca- fluoro-	27
5940	1-Nonanol, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9- hexadecafluoro-	72
5938	1-Fentanol, 2,2,3,3,4,4,5,5-octafluoro-	18
7164	1-Pentyn-3-ol, 1-chloro-3-ethyl-	66
5942	1-Propanol, 2,2,3,3-tetrafluoro-	20
5009	2-Propanol, 1,1,1,3,3-hexachloro-	92
3340	-----, 1-iodomercuri-	97
3085	-----, 1,1,1-tribromo-2-methyl-	69
5237	2-Propyn-1-ol, 1,1-bis(p-chlorophenyl)-	91
Heterocyclic Compounds		
3718	Cinchonine, salt with 1 f. wt. mandelic acid	96
5741	Ethanol, 2-(2-heptadecylimidazol-1-yl)-	(T)
6801	Imidazole, 1-(2-hydroxyethyl)-	51
4318, 7006*	1-Imidazolineethanol, x-heptadecen-2-yl-	86, 99
4319	-----, 2-heptadecyl-	90
4317	-----, 2-tridecyl-	90
3948	4-Morpholineethanol	49
6812	3-Oxazolidineethanol, 2-nonyl-	78
6381	1-Piperidineethanol, $\alpha$ -carvacryl-, hydrochloride	88
4166	Piperonal, diethyl acetal	43
6286	1(4H)-Pyrimidineethanol, 2-heptadecyl-5,6-dihydro-	78
3251	2-Quinolineethanol	46

TABLE I

Code No.	Classification and Name	K Value
ALCOHOLS		
Monosubstituted		
Imides		
6738*	Maleimide, N-hydroxymethyl-	99
3257	Pthalimide, N-2-hydroxyethyl-	46
6050	-----, N-(3-hydroxy-4-hexenyl)-	76
5987	-----, N-(3-hydroxy-3-methylbutyl)-	76
6049	-----, N-(3-hydroxy-3-methylpentyl)-	71
Ketones		
6005	Acetophenone, 2-hydroxy-	65
7200	Adipoin	75
5494	2-Butanone, 3-hydroxy-3-methyl-	-23
4165	Cyclohexanone, 3-hydroxy-3-phenyl-	78
5272	-----, 2,2,6,6-tetrakis(hydroxymethyl)-	48
Phenols		
6818	2-Biphenylmethanol, 2'-hydroxy-a,a-dimethyl-	79
4650	Phenol, p-(3-hydroxy-3-methylbutyl)-	93
Quaternary Nitrogen Compounds		
Ammonium compounds.		
4501	benzylbis(2-hydroxyethyl)dodecyl----- chloride	90
4503	benzylbis(2-hydroxyethyl)hexadecyl----- chloride	98
4502	benzylbis(2-hydroxyethyl)tetradecyl----- chloride	98
5420	decamethylenebis[(2-hydroxyethyl)dimethyl----- bromide	53
5423	decamethylenebis[bis(2-hydroxyethyl)methyl----- bromide	33
6545	hexadecyl(2-hydroxyethyl)methyl(2,3,4,5,6-pentahydroxyhexyl)----- bromide	84
Imidazolium compounds.		
6998*	1(or 3)-benzyl-2-coco-1-(2-hydroxyethyl)-2----- chloride, 60 percent in isopropyl alcohol	92
7000*	1(or 3)-benzyl-x-heptadecen-2-yl-1-(2-hydroxyethyl)-2----- chloride, 60 percent in isopropyl alcohol	92
Morpholinium compounds.		
3949	4,4-bis(2-hydroxyethyl)----- chloride	-5
Sulfonic Acids		
4012	Isethionic acid	-19
5391	Methanesulfonic acid, hydroxy-, sodium salt	36
Thiocarbamates		
3960	Carbamic acid, bis(2-hydroxyethyl)dithio-, copper(II) salt	90
3961	mercury(II) salt	-16

TABLE I

Code No.	Classification and Name	K Value
ALCOHOLS		
Monosubstituted		
Thiocureas		
5658	Ethanol, 2-[ <u>(2-imidazolinyl)thio</u> ]-, hydrochloride	74
5632	Pseudourea, 2-[ <u>(2-hydroxyethyl)thio</u> ]-, complex with ethylene glycol and hydrochloric acid	82
2783	Urea, 1-ethyl-3-(2-hydroxyethyl)-2-thio-	81
Ureas		
4327	Glycoluril, 1,3,4,6-tetrakis(hydroxymethyl)-	57
6396	2-Imidazolidinone, 1-(2-hydroxyethyl)-	-37
Miscellaneous		
7045	Benzoin, <u>anti</u> -oxime	98
5099	1,2-Ethanediol, cyano-	(T)
3410	Ethanol, 2,2'-(decamethylenedithio)di-	61
3436	-----, 2,2'-sulfinyldi-	-44
Phosphonium compounds.		
5387	tetrakis(hydroxymethyl)----- chloride	83
4302	Pivalaldehyde, hydroxy-	41
5797	Semicarbazide, 2-(2-hydroxyethyl)-	93
Disubstituted		
Amide-Halides		
5129*	Acetamide, 2-chloro-N-dodecyl-N-(2-hydroxyethyl)-	95
7214	-----, 2-( <u>p</u> -chlorophenyl)-N-(2-hydroxyethyl)-	69
7144*	2-Propanol, 3-benzamido-1,1,1-trichloro-	94
Amine-Ethers		
6622	1-Naphthalenemethanol, $\alpha$ -(2-dibutylamino-1,1-dimethylethyl)-4-methoxy-, hydrochloride	94
6538	-----, $\alpha$ -(dibutylaminomethyl)-2-methoxy-, hydrochloride	92
6658	-----, $\alpha$ -(dipentylaminomethyl)-2-methoxy-, hydrochloride	96
6536	9-Phanthrenemethanol, $\alpha$ -( <u>N</u> -butyl- <u>p</u> -methoxy-anilinomethyl)-1,2,3,4-tetrahydro-, hydrochloride	85
Amine-Halides		
5111	Aniline, <u>o</u> -chloro-N,N-bis(2-hydroxypropyl)-	83
6559	Benzyl alcohol, <u>o</u> -chloro- $\alpha$ -(dioctylaminomethyl)-	91

TABLE I

Code No.	Classification and Name	K Value
ALCOHOLS		
Disubstituted		
Amine-Halides		
6672	Ethanol, 2-( <u>p</u> -bromobenzylamino)-, hydrochloride	73
5105	-----, 2-( <u>m</u> -chloroanilino)-	81
5103	-----, 2-( <u>o</u> -chloroanilino)-	82
5333	-----, 2,2'-( <u>m</u> -chloroanilino)bis-	65
5120	-----, 2-(2,5-dichloroanilino)-	77
6676	1-Naphthalenemethanol, 4-bromo- $\alpha$ -(dodecylamino-methyl)-	42
6669	-----, 4-chloro- $\alpha$ -(2-diethylaminoethyl)-, hydrochloride, hydrate	<u>100</u>
6640	-----, 2-chloro- $\alpha$ -(dihexylaminomethyl)-, hydrochloride	<u>93</u>
6670	-----, 2-chloro- $\alpha$ -(dipentylaminomethyl)-, hydrochloride	96
4813	2-Propanol, 1,1'- <u>o</u> -chloroanilinobis-	<u>94</u>
5334	-----, 1-chloro-3-( <u>N</u> -ethyl- <u>m</u> -toluidino)-	80
Amine-Phenols		
6662	Ethanol, 2-(5- <u>tert</u> -butyl-2-hydroxybenzylamino)-	98
6655	-----, 2,2'-(5- <u>tert</u> -butyl-2-hydroxybenzyl-amino)bis-	<u>93</u>
6702	-----, 2,2'-(5- <u>tert</u> -butyl-2-hydroxy-3-phenyl-benzylamino)bis-	<u>92</u>
6654	-----, 2-[5-(1,1-dimethylpropyl)-2-hydroxybenzyl-amino]-	97
6018	-----, 2,2'-( <u>p</u> -hydroxyanilino)bis-	<u>44</u>
5330	-----, 2-( <u>o</u> -hydroxybenzylamino)-	34
6649	-----, 2-(2-hydroxy-3-phenylbenzylamino)-	83
Carbamate-Halides		
4749	Carbamic acid, 2,2,3-trichloro-1-hydroxybutyl-, butyl ester	<u>92</u>
5474	-----, 2,2,2-trichloro-1-hydroxyethyl-, iso-propyl ester	25
Ether-Halides		
3944	Ethanol, 2-(pentachlorophenoxy)-	94
6441	1,2-Propanediol, 3-( <u>p</u> -chlorophenoxy)-	<u>55</u>
3386	2-Propanol, 1-( <u>p</u> -chlorophenoxy)-	64

TABLE I

Code No.	Classification and Name	K Value
ALCOHOLS		
Disubstituted		
Ether-Quaternary Nitrogen Compounds		
Ammonium compounds.		
4334	benzyl(2-hydroxyethyl)methyl[2-[2-[x-(1,1,3,3-tetra-methylbutyl)phenoxy]ethoxy]ethyl]----- chloride	97
Morpholinium compounds.		
3950	4,4'-oxydiethylenebis[4-(2-hydroxyethyl)]----- chloride	-77
Halide-Heterocyclic Compounds		
6671	4-Morpholineethanol, 1-(p-bromophenyl)-3-ethyl-, hydrochloride	92
4468	2-Pyridineethanol, 1-(trichloromethyl)-	97
6318	4-Quinolinemethanol, 8-chloro-2-(p-chlorophenyl)- α-2-piperidyl-	92
Halide-Nitro Compounds		
4470	Benzyl alcohol, 3,4-dichloro-α-1-nitroethyl-	87
7261	2-Butanol, 1,1,1-trichloro-3-nitro-	19
7142*, 7143	2-Propanol, 1,1,1-trichloro-3-nitro-	88, 97
Halide-Phenols		
7100, 7291*	2,2'-Methylenebis(4-chloro-6-hydroxymethylphenol)	66, 75
6248	Saligenin, 5-chloro-	90
Halide-Phosphorus Compounds		
4464	α-Toluenephosphonic acid, o-chloro-α-hydroxy-, diethyl ester	85
2980	-----, 2,4-dichloro-α-hydroxy-, diethyl ester	86
Halide-Quaternary Nitrogen Compounds		
Ammonium compounds.		
4506	bis(2-hydroxyethyl)(2,4-dichlorobenzyl)hexadecyl----- chloride	97
4507	bis(2-hydroxyethyl)(3,4-dichlorobenzyl)hexadecyl----- chloride	88
4504	bis(2-hydroxyethyl)(2,4-dichlorobenzyl)tetradecyl----- chloride	99
4505	bis(2-hydroxyethyl)(3,4-dichlorobenzyl)tetradecyl----- chloride	99
Imidazolium compounds.		
7005	1(or 3)-(4-chlorobutyl)-x-heptadecen-2-yl-1-(2-hydroxyethyl)-2----- chloride. 60 percent in isopropyl alcohol	97

TABLE I

TABLE I

Code No.	Classification and Name	K Value
ALCOHOLS		
Disubstituted		
	Miscellaneous	
2979	$\alpha$ -Tolueneephosphonic acid, $\alpha$ , $p$ -dihydroxy-	40
2996	-----, $\alpha$ -hydroxy- $m$ -nitro-, diethyl ester	81
6410*	Urea, 3-(2-hydroxyethyl)-1-(1,1-dimethyl-3-oxobutyl)-2-thio-	<u>98</u>
Polysubstituted		
2995	Acetophenone, 4'-[ $(2,2,2$ -trichloro-1-hydroxyethyl)-amino]-	71
4935	2-Anisidineethanol, $\alpha$ -chloromethyl-	67
6558	Benzyl alcohol, $\alpha$ -(benzylethylaminomethyl)-3-chloro-4-ethoxy-, hydrochloride	<u>92</u>
6557	-----, 3-chloro-4-ethoxy- $\alpha$ -(phenethylamino-methyl)-, hydrochloride	66
3911	2-Cyclohexene-1,2-dicarboxylic anhydride, 5-acetyl-3-carboxymethyl-4,6,6-trihydroxy-6-methyl-, $\gamma$ -lactone	44
4752	Ethanol, 1-(4-amino-6-phenyl-s-triazin-2-,1-amino)-,2,2-trichloro-, and s-Triazine, 2,4-bis(2,2,2-trichloro-1-hydroxyethylamino)-6-phenyl-	25
6674	-----, 2-(3-bromo-5- <u>tert</u> -butyl-2-hydroxybenzyl-amino)-	<u>23</u>
6675	-----, 2-( <u>tert</u> -butyl-3-chloro-2-hydroxybenzyl-amino)-	100
6094	---, 2-[N-(3-chloroballyl)-2-chloro-3-methoxy-anilino]-	50
4932	-----, 2-(2-chloro-3, $\beta$ -dinitrobenzenesulfonamido)-	<u>23</u>
6316	-----, 2-[4-( $\beta$ -chloro-4-quinolylamino)pentyl]-ethylamino]-, monosulfate	22
4469	-----, 2,2,2-trichloro-1-salicylamide	20
5801	DL- $\alpha$ -Furanserine	4
5454	Glycolic acid, [(4,5-dihydro-2-imidazolyl)thio]-, hydrochloride	4
6298	Hydracrylic acid, 2-bromo-1-(3,4-dimethoxy-phenyl)-, methyl ester	3
280	$\Delta$ -Naphthamide, 1,2,3,4-tetrahydro-6-hydroxy-4-(4-hydroxy-3-methoxyphenyl)-3-hydroxymethyl-7-methoxy-, from $\alpha$ -coniferin	1
5673	Phosphonic acid, ( $\omega$ , $\omega$ , $\omega$ -trichloro-1-hydroxybutyl)-, bis-[2-(2-thiocyanatoethoxy)ethyl] ester	4
5674	-----, ( $\omega$ , $\omega$ , $\omega$ -trichloro-1-hydroxyethyl)-, bis-[2-(2-thiocyanatoethoxy)ethyl] ester	4

TABLE I

Code No.	Classification and Name	K Value
ALCOHOLS		
Polysubstituted		
6667	2-Propanol, 1-(7-chloro-4-quinolylamino)-3-dimethyl-amino-, diphosphate	97
6309	Protocatechuyl alcohol, $\alpha$ -[1-(p-methoxyphenyl)-2-propylaminomethyl]-, hydrochloride	89
6368	4H-Pyran-4-one, 2-benzoyl-3-hydroxy-6-(hydroxymethyl)-	13
6319	4-Quinolinemethanol, 7-chloro-2-(p-chlorophenyl)- $\alpha$ -(dimethylaminomethyl)-, hydrochloride	94
6320	-----, 3-(p-chlorophenyl)- $\alpha$ -(diethylaminomethyl)-6-methoxy-	75
6540	-----, $\alpha$ -( $\beta$ -dibutylaminopropyl)-6-methoxy-, hydrochloride	93
6719	Salicylamide, 5-chloro-N-(2-hydroxyethyl)-	84
6721	-----, 5-chloro-N-(3-hydroxypropyl)-	94
ALDEHYDES		
Unsubstituted		
5223	$\alpha$ -Campholenaldehyde	56
5390	Cinnamaldehyde	73
5497	-----, $\alpha$ -methyl-	57
6785	Heptaldehyde bisulfite	37
7202	Hydrocinnamaldehyde	97
4711	Isobutyraldehyde, bis( $\omega$ -methylallyl) acetal	96
Monosubstituted		
Ethers		
7209	Benzaldehyde, $\omega$ -methoxy-	55
3249	Glutaraldehyde, $\alpha$ -methoxymethyl- $\alpha$ , $\gamma$ -dimethyl-	36
3252	1-Naphthaldehyde, 2-ethoxy-	-1
Nitro Compounds		
3897	Benzaldehyde, $m$ -nitro-	51
3998	-----, $p$ -nitro-	74
Miscellaneous		
3996	Butyraldehyde, $\alpha$ , $\alpha$ , $\beta$ -trichloro-	40
4302	Pivaldehyde, hydroxy-	41
3612	2-Pyrrolecarboxaldehyde	77

TABLE I

Code No.	Classification and Name	K Value
ALDEHYDES		
Polysubstituted		
7047	Butyraldehyde, $\alpha,\alpha,\beta$ -trichloro-, and propionamide	95
6760	Fumaramic acid, N-formyl-	64
5313, 5788	2-Furaldehyde, 5-nitro-	96, 95
3784, 3909	Mucochloric acid	65, 76
3338	Opianic acid	35
4260	Salicylaldehyde, 3,5-dichloro-	96
AMIDES		
Unsubstituted		
Monobasic Acids		
6091	Acetamide, N-(5-acenaphthetyl)-	71
4802, 5114	-----, N-allyl-	88, 89
4872	-----, N-tert-butyl-, hydrobromide	49
3489	-----, N-cyclohexyl-N-methyl-	91
3492	-----, N-cyclohexyl-N-propyl-	72
6134	-----, N,N-dibenzyl-	94
6133	-----, N,N-dimethyl-	31
3529	-----, N,N-dipentyl-	95
4133	-----, N,N-diphenyl-	83
6119	-----, N,N'-ethylenebis-	38
6026	-----, N-2-fluorenyl-	80
6687	-----, N-isobornyl-	70
6135	-----, N-2(or 3?)-pentyl-	70
6136	-----, N,N'-2,5-tolylenebis-	29
3327	Acetanilide	46
6116	-----, N-butyl-	80
3018	-----, N-cyclohexyl-	77
5042	-----, N-ethyl-	76
6129	-----, N-isopentyl-	94
6112	-----, N-methyl-	77
6117	-----, N-pentyl-	88
6118	-----, p-2(or 3?)-pentyl-	49
3443, 5354	-----, o-phenyl-	94, 34
3261	-----, p-phenyl-	57
6224	Acrylamide	63
4568*, 4787	-----, N-tert-butyl-	92, 39
6229	-----, N-cyclohexyl-	71
4477, 4830	-----, N-(2,2-dimethylnorborn-3-ylmethyl)-	71, 67
6095	-----, N-isobornyl-	75
5133		57

TABLE I

Code No.	Classification and Name	K Value
AMIDES		
Unsubstituted		
Monobasic Acids		
3971	Acrylamide, <u>N</u> -isopropyl-	96
4581	polymer	35
4567	-----, <u>N</u> -isopropyl-2-methyl-	88
4825	-----, methylenebis-	56
4822, 511 <sup>F</sup>	-----, <u>N</u> -methyl-	94, 98
4574	-----, <u>N</u> -(1,1,3,3-tetramethylbutyl)-	100
4722	Acrylanilide	88
6419	Benzamide, <u>N</u> -allyl-	88
6420	-----, <u>N</u> -butyl-	95
6422	-----, <u>N</u> -sec-butyl-	64
6423	-----, <u>N</u> -tert-butyl-	84
3502	-----, <u>N</u> -cyclohexyl-	70
6416	-----, <u>N</u> -ethyl-	49
6421	-----, <u>N</u> -isobutyl-	63
6413	-----, <u>N</u> -isopropyl-	56
6415	-----, <u>N</u> -methyl-	3
6432	-----, <u>N</u> -pentyl-	87
6417	-----, <u>N</u> -propyl-	44
4579	-----, <u>N</u> -(1,1,3,3-tetramethylbutyl)-	80
6426	-----, <u>N</u> -m-tolyl-	24
6425	-----, <u>N</u> -o-tolyl-	36
6427	-----, <u>N</u> -p-tolyl-	55
7057	Benzanilide	66
6152	Butyramide, <u>N</u> -benzyl-	51
5064	-----, <u>N</u> -butyl-	96
6145	-----, <u>N</u> -sec-butyl-	68
4755, 6154	-----, <u>N</u> -cyclohexyl-	86, 83
6150	-----, <u>N,N</u> -dibenzyl-	89
6146	-----, <u>N,N</u> -dibutyl-	98
6141	-----, <u>N,N</u> -diethyl-	63
6143	-----, <u>N,N</u> -diisopropyl-	71
6149	-----, <u>N,N</u> -dipentyl-	86
6151	-----, <u>N,N</u> -dipropyl-	83
7050	-----, 2-ethyl-	90
6144	-----, <u>N</u> -isobutyl-	70
6158	-----, <u>N</u> -1-naphthyl-	73
6179	-----, <u>N</u> -2-naphthyl-	71
6147	-----, <u>N</u> -pentyl-	90
6143	-----, <u>N</u> -2(or 3?)-pentyl-	92
6142	-----, <u>N</u> -propyl-	47

TABLE I

Code No.	Classification and Name	K Value
AMIDES		
Unsubstituted		
Monobasic Acids		
5850, 7173	Butyranilide	72, 87
5062	-----, N-butyl-	99
5061	-----, N-ethyl-	100
5063	-----, N-isopentyl-	100
5060	-----, N-methyl-	99
6140	-----, N-pentyl-	98
5071	m-Butyrotoluidide	86
5072	o-Butyrotoluidide	36
5074	p-Butyrotoluidide	100
5241	3-Camphenilaneacetamide	87
5248	3-Camphenilaneacetanilide	85
3902	Cinnamamide, N,N-diethyl-	82
7079	Cinnamanilide	63
5104	Crotonamide, N-allyl-	91
3140	m-Crotonotoluidide, N-ethyl-	94
4180	Cyclohexaneacetamide, 4-phenyl-	75
6254	Diacetamide, 2,2'-diphenyl-	-10
3534	Dodecanamide, N-cyclohexyl-	17
2889, 7056	Dodecananilide	-145, 33
6161	Formamide, N-butyl-	43
6163	-----, N-sec-butyl-	71
5381	-----, N-tert-butyl-	96
6173	-----, N,N-dibenzyl-	54
6166	-----, N,N-dibutyl-	88
6196	-----, N,N-dicyclohexyl-	89
6159	-----, N,N-diethyl-	32
6165	-----, N,N-diisopropyl-	88
6172	-----, N,N-dioctyl-	49
6168	-----, N,N-dipentyl-	95
6164	-----, N,N-dipropyl-	73
6170	-----, N-heptyl-	53
5923	-----, N,N'-hexamethylenebis-	33
6169	-----, N-2-hexyl-	94
6162	-----, N-isobutyl-	68
6171	-----, N-octyl-	69
6167	-----, N-2(or 3?)-pentyl-	99
6160	-----, N-propyl-	38
6175	Formanilide, N-butyl-	85
6174	-----, N-ethyl-	64
6177	-----, N-isopentyl-	93
6176	-----, N-pentyl-	95
3830	-----, o-phenyl-	50

TABLE I

Code No.	Classification and Name	K Value
AMIDES		
Unsubstituted		
Monobasic Acids		
7068	Hexanilide	76
4571	Isobutyramide, <u>N</u> - <u>tert</u> -butyl-	89
4573*, 4788 5440*	-----, <u>N</u> -cyclohexyl-	99, 99
3879	-----, <u>N,N</u> -diethyl	56
6688	-----, <u>N</u> -isobornyl-	94
4569	-----, <u>N</u> -isopropyl-	88
4576	-----, <u>N</u> -(1,1,3,3-tetramethylbutyl)-	97
5849	Isobutyranilide	81
7048	Isovaleramide	65
2891	Linoleanilide, dimer	-120
5025	Methacrylanilide	80
3124	Oleamide, <u>N</u> -octadecyl-	-30
6281	Piperidine, 1-benzoyl-	67
6209	Pivalamide, <u>N,N</u> -diethyl-	67
5011	Pivalanilide	89
6114	Propionamide, <u>N,N'</u> - <u>p</u> -phenylenebis-	10
7065	Propionanilide	70
6107	-----, <u>p</u> -acetamido-	42
5044	-----, <u>N</u> -butyl-	85
5043	-----, <u>N</u> -ethyl-	92
6138	-----, <u>N</u> -isopentyl-	80
6113	-----, <u>N</u> -methyl-	45
6137	-----, <u>N</u> -pentyl-	88
6139	-----, <u>p</u> -2(or 3?)-pentyl-	93
6109	-----, <u>o</u> -phenyl-	61
6085	Sorbamide, <u>N</u> -isobutyl-	52
6370*	x-Toluamide, <u>N,N</u> -diethyl-	88
5820	Toluamide, <u>N,N</u> -diethyl, chiefly <u>m</u> - isomer	82
Unsubstituted		
Polybasic Acids		
3199	Decanediamide	-66
5425	-----, <u>N,N'</u> -dicyclohexyl-	-31
5328	-----, <u>N,N'</u> -diethylene-	-12
5427	-----, <u>N,N,N',N'</u> -tetracyclohexyl-	32
3117	Fumaramide	19
2951	Glutaranilide	-45
4578	Hexanediamide, <u>N,N'</u> -di- <u>tert</u> -butyl-	57
2940	Itaconamide	22

TABLE I

Code No.	Classification and Name	K Value
AMIDES		
Unsubstituted		
Polybasic Acids		
7174	Malonanilide	56
6695	-----, 2-benzylidene-	54
3717	p-Malonotoluidide	-38
5285	Oxamide, N,N'-dicyclohexyl-	-48
5283	-----, N,N'-diisopropyl-	37
3389	-----, N,N'-dimethyl-	-29
5966	Phthalamide, N,N'-dibenzyl-	41
5960	-----, N,N'-dibutyl-N,N'-diphenyl-	31
5957	-----, N,N'-dicyclohexyl-	46
5964	-----, N,N'-diisopropyl-	30
5958	-----, N,N'-dipentyl-	80
5959	-----, N,N'-dipentyl-N,N'-diphenyl-	66
5965	-----, N,N'-dipropyl-	70
Monosubstituted		
Acids		
4803	Acrylic acid, 2-acetamido-, ammonium salt	48
4756	Anthranilic acid, N-butyryl-	64
4363	---, N,N'-oxalyl, di-	63
2953	Citraconanilic acid, p-methyl-	78
3442	Hexanoic acid, $\epsilon$ -benzamido-	79
6750	Maleamic acid, N-isopropyl-	61
5136	-----, N-methyl-	54
6751	-----, N-phenyl-	60
2964	Maleanic acid, p-methyl-	63
4016	Oxanilic acid	46
5511	Phenaceturic acid	49
3740	Phthalamic acid, N-dodecyl-	31
6353	-----, N-isopropyl-, copper(II) salt	72
5533	-----, N-1-naphthyl-	65
5816	-----, N-2-naphthyl-	86
4678	Stearic acid, $\theta$ -acetamido-	13
Alcohols		
6444	Hexanamide, 2-ethyl-N-(2-hydroxypropyl)-	69
4570*	Lactamide, N-tert-butyl-	92
2999	-----, N-(2-hydroxy-1,1-dimethylethyl)-	34
4577	-----, N-isobornyl-	56
5134	Malonamide, N,N'-bis(2-hydroxyethyl)-	51
6786	Oleamide, N,N'-ethylenebis[12-hydroxy-	37
6783	-----, 12-hydroxy-N-(2-hydroxyethyl)-	68
3412	Oxamide, N,N'-bis(2-hydroxyethyl)-	1

TABLE I

Code No.	Classification and Name	K Value
AMIDES		
Monosubstituted		
Alcohols		
4791	Propionamide, <u>N</u> -tert-butyl-2-hydroxy-	67
4792	-----, <u>N</u> -(1,1-diethylbutyl)-3-hydroxy-	82
6096	-----, <u>N</u> -(3-hydroxy-2,2-dimethylpropyl)-3-hydroxy-	
	2,2-dimethyl-	54
4793*	-----, 2-hydroxy- <u>N</u> -isobornyl-	97
4580	-----, 3-hydroxy- <u>N</u> -isobornyl-	79
6089	-----, 3-hydroxy- <u>N</u> -isopropyl-	50
4575*	-----, 3-hydroxy- <u>N</u> -(1,1,3,3-tetramethylbutyl)-	94
6784	Stearamide, <u>N,N'</u> -ethylenebis[12-hydroxy-	-27
6782	-----, 12-hydroxy- <u>N</u> -(2-hydroxyethyl)-	8
6098	Terephthalamide, <u>N,N'</u> -bis(5-hydroxypentyl)-	-5
Amines		
4804	Acetamide, 2-cyclohexylamino-	89
6122	Acetanilide, 4'-dimethylamino-	89
4837	-----, 4'-isobutylamino-	100
2913	2',4'-Benzoylidide, 5'-amino-	94
3130	Crotonanilide, <u>N</u> -sec-butyl-4'-(sec-butylamino)-	75
5109	Oleamide, <u>N</u> -(3-diethylaminopropyl)-	87
4810	Sebacamide, <u>N,N'</u> -bis(2-aminoethyl)-	59
Azo Compounds		
5050	Acetanilide, 4'-phenylazo-	72
5051	<u>o</u> -Acetotoluidide, 4'-( <u>m</u> -tolylazo)-	70
Esters		
4841	Acetamide, <u>N</u> -2-(1-acetoxy-2-methylpropyl)-	61
4816	-----, <u>N</u> -(2,5-bis(acetoxy)pentyl)-	28
4828	-----, <u>N</u> -bis(ethyl carbonyl)methyl-	29
4934	-----, <u>N,N'</u> -di-(2,7-dimethyloctylene)-	
	bis[2-ethyl carbonyl-	63
5518	-----, <u>N</u> -(ethyl carbonylmethyl)-2-mesityl-	49
3441	Acetanilide, p-ethoxycarbonyl-	59
6121	-----, <u>m</u> -hydroxy-, acetate	47
5041	-----, <u>p</u> -hydroxy-, acetate	69
3294	Lactamide, acetate	24
3295	-----, <u>N</u> -butyl-, lauric acid ester	14
4572	-----, <u>N</u> -tert-butyl-, acetate	89
4118	Lactanilide, $\alpha$ -ethylcaprylic acid ester	57
5171, 5483	Oxanilic acid, ethyl ester	58, 41
4677	Palmitamide, <u>N</u> -(2-hydroxyethyl)-, acetate	-2

TABLE I

Code No.	Classification and Name	K Value
AMIDES		
Monosubstituted		
Ethers		
6124	Acetanilide, 2',5'-diethoxy-	68
6123	-----, 2',5'-dimethoxy-	53
4999	Anisamide, <u>N</u> -allyl-	95
6102	-----, <u>N</u> -benzyl-	57
6103	-----, <u>N</u> -cyclohexyl-	50
6100	-----, <u>N,N</u> -diethyl-	84
6101	-----, <u>N,N</u> -diisopropyl-	79
4987	-----, <u>N</u> -ethyl-	75
4997	-----, <u>N</u> -isobutyl-	80
4990	-----, <u>N</u> -isopropyl-	96
4988	-----, <u>N</u> -methyl-	74
4989	-----, <u>N</u> -propyl-	88
6104	Anisanilide	38
5005	p-Anisanisidide	39
6189	Benzamide, <u>N</u> -benzyl- <u>o</u> -ethoxy-	73
6220	-----, <u>N</u> -benzyl- <u>p</u> -ethoxy-	5
6185	-----, <u>N</u> -butyl- <u>o</u> -ethoxy-	76
6215	-----, <u>N</u> -butyl- <u>p</u> -ethoxy-	75
6193	-----, <u>N</u> -sec-butyl- <u>o</u> -ethoxy-	84
6218	-----, <u>N</u> -sec-butyl- <u>p</u> -ethoxy-	45
6203	-----, <u>N</u> -cyclohexyl- <u>o</u> -ethoxy-	50
6219	-----, <u>N</u> -cyclohexyl- <u>p</u> -ethoxy-	33
6194	-----, <u>N,N</u> -dibenzyl- <u>o</u> -ethoxy-	28
6188	-----, <u>N,N</u> -dibutyl- <u>o</u> -ethoxy-	85
6216	-----, <u>N,N</u> -dibutyl- <u>p</u> -ethoxy-	83
6207	-----, <u>N,N</u> -dicyclohexyl- <u>o</u> -ethoxy-	83
7140	-----, <u>o</u> -ethoxy-	80
6213	-----, <u>p</u> -ethoxy- <u>N,N</u> -diethyl-	63
4798	-----, <u>z</u> -ethoxy- <u>x,x</u> -diethyl-	74
6192	-----, <u>o</u> -ethoxy- <u>N,N</u> -diisopropyl-	51
6210	-----, <u>p</u> -ethoxy- <u>N,N</u> -dimethyl-	60
6222	-----, <u>p</u> -ethoxy- <u>N,N</u> -dipentyl-	77
6187	-----, <u>o</u> -ethoxy- <u>N,N</u> -dipropyl-	82
6214	-----, <u>p</u> -ethoxy- <u>N,N</u> dipropyl-	79
6191	-----, <u>o</u> -ethoxy- <u>N</u> -isobutyl-	33
6217	-----, <u>p</u> -ethoxy- <u>N</u> -isobutyl-	61
6195	-----, <u>o</u> -ethoxy- <u>N</u> -isopropyl-	53
6211	-----, <u>p</u> -ethoxy- <u>N</u> -methyl-	30
6221	-----, <u>p</u> -ethoxy- <u>N</u> -pentyl-	51
6190	-----, <u>o</u> -ethoxy- <u>N</u> -propyl-	20
6214	-----, <u>p</u> -ethoxy- <u>N</u> -propyl-	55

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Code No.	Classification and Name	K Value
AMIDES		
Monosubstituted		
Ethers		
6205	Benzanilide, N-butyl-2-ethoxy-	88
6206	-----, 2-ethoxy-N-ethyl-	<u>39</u>
6204	-----, 2-ethoxy-N-methyl-	28
5006	<u>o</u> -Benzanisidine, 4-methoxy-	38
5001	<u>m</u> -Benzotoluidide, 4-methoxy-	71
5002	<u>p</u> -Benzotoluidide, 4-methoxy-	21
5003	<u>p</u> -Benzotoluidide, 4-methoxy-	27
5073	<u>o</u> -Butyranisidine	100
6155	<u>p</u> -Butyranisidine	64
6157	<u>o</u> -Butyrophenetidide	56
4758, 6156	<u>p</u> -Butyrophenetidide	58, 32
5426	Decanediamide, N,N'-bis(3,4-dimethoxyphenyl)-	42
6183	<u>p</u> -Formanisidine	52
6184	<u>o</u> -Formophenetidide	59
5961	Phthalamide, N,N'-bis( <u>p</u> -methoxyphenyl)-	81
4991	Piperidine, 1-( <u>p</u> -anisoyl)-	94
Halides		
6090	Acetamide, N-allyl-2-chloro-	87
7041	-----, 2-bromo-N-sec-butyl-	<u>99</u>
7178	-----, 2-bromo-N-cyclohexyl-	<u>99</u>
5819	-----, N-tert-butyl-, hydrigeniodide, compound with $\frac{1}{2}$ f. wt. iodine	70
3485	-----, 2-chloro-	21
4930	-----, 2-chloro-N-hexadecyl-	72
6132	Acetanilide, 2'-acetamido-4'-chloro-	75
7063	-----, 2'-bromo-	66
3099	-----, 2-chloro-	89
7049	-----, 2'-chloro-	94
7064	-----, 4'-chloro-	87
7051	-----, 2,2-dichloro-	<u>94</u>
5048	-----, 2',5'-dichloro-	71
5049	-----, 2',5'-dichloroiodo-	76
6020	-----, 4'-ido-	80
7053	-----, 4,4',4'-trichloro-	96
7181	Aceto- <u>o</u> -toluidide, 2-bromo-	<u>92</u>
5326	Acrylamide, N-( <u>m</u> -chlorophenyl)-	67
5842	-----, 2,3-dichloro-N-( <u>m</u> -chlorophenyl)-	<u>95</u>
4778	Benzamide, N-benzyl- <u>o</u> -chloro-	<u>59</u>
4779	-----, N-benzyl-p-chloro-	34
4437	-----, N-benzyl-2,4-dichloro-	43
4443	-----, N-sec-butyl- <u>o</u> -chloro-	45
4775	-----, <u>o</u> -chloro-N-cyclohexyl-	<u>50</u>
4776	-----, <u>p</u> -chloro-N-cyclohexyl-	30

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Code No.	Classification and Name	K Value
AMIDES		
Monosubstituted		
Halides		
4781	Benzamide, p-chloro-N,N-dipropyl-	98
4454	-----, p-chloro-N-(1-methylpentyl)-	95
4444	-----, o-chloro-N-pentyl-	89
4780	-----, p-chloro-N-2(or 3?)-pentyl-	90
4436	-----, 2,4-dichloro-N-cyclohexyl-	71
4902	-----, 2,4-dichloro-N-isobutyl-	85
4919	-----, 2,4-dichloro-N-(1-methylbutyl)-	87
4459	-----, 2,4-dichloro-N-pentyl-	90
4445	Benzanilide, 4'-bromo-2-chloro-	85
4456	-----, 2'-bromo-2,4-dichloro-	35
4429	-----, 4'-bromo-2,4-dichloro-	58
4430	-----, 4'-bromo-3,4-dichloro-	41
6428	-----, 2'-chloro-	35
6429	-----, 3'-chloro-	12
4449	-----, 4-chloro-	52
6430	-----, 4'-chloro-	6
4447	-----, 2,2'-dichloro-	75
4448	-----, 2,3'-dichloro-	59
4457	-----, 2,4'-dichloro-	98
4773	-----, 2',4-dichloro-	14
6431	-----, 2',5'-dichloro-	14
4774	-----, 3',4-dichloro-	3
4458	-----, 2,4-dichloro-2'-phenyl-	38
4428	-----, 2,2',4,5'-tetrachloro-	33
4455	-----, 2',3,4,5'-tetrachloro-	30
4905	-----, 2,2',4-trichloro-	32
4906	-----, 2,3',4-trichloro-	36
4432	-----, 2',3,4-trichloro-	17
4907	-----, 2,4,4'-trichloro-	28
4433	-----, 2,4,5'-trichloro-	35
4434	-----, 3,3',4-trichloro-	72
4450	m-Benzotoluidide, 2-chloro-	64
4451	o-Benzotoluidide, 2-chloro-	72
4452	p-Benzotoluidide, 2-chloro-	90
4440	o-Benzotoluidide, 4-chloro-	57
4441	p-Benzotoluidide, 4-chloro-	40
4908	m-Benzotoluidide, 2,4-dichloro-	13
4910	p-Benzotoluidide, 2,4-dichloro-	26
4909	m-Benzotoluidide, 3,4-dichloro-	36

TABLE I

Code No.	Classification and Name	K Value
AMIDES		
Monosubstituted		
Halides		
6153	Butyranilide, 4'-bromo-	67
5066	-----, 2'-chloro-	63
5065	-----, 3'-chloro-	95
5067	-----, 4'-chloro-	90
5441	-----, 3'-chloro-perfluoro-	65
5847	-----, 3'-chloro-2,2,3-trichloro-	73
5070	-----, 2',5'-dichloro-	61
6178	Formanilide, 2'-chloro-	53
6180	-----, 3'-chloro-	41
6181	-----, 4'-chloro-	95
5763	-----, 2',4'-dichloro-	76
6182	-----, 2',5'-dichloro-	55
5848	Isobutyranilide, 3'-chloro-	67
5748	-----, 4'-chloro-	(T)
5758	-----, 2',4'-dichloro-	61
7126	Oxanilide, 3,3'-dichloro-	32
5963	Phthalamide, <u>N,N'</u> -bis( <u>o</u> -chlorophenyl)-	95
6689	Propionamide, 3-chloro- <u>N</u> -methyl-	67
7179	Propionanilide, 2'-bromo-	96
6106	-----, 4'-bromo-	85
5054	-----, 2'-chloro-	63
3100, 5055	-----, 3'-chloro-	71, 62
5053	-----, 4'-chloro-	92
4686, 5056	-----, 2',5'-dichloro-	47, 58
6110	<u>o</u> -Propionotoluidine, 5'-chloro-	57
Heterocyclic Compounds		
3503	Acetamide, <u>N</u> -cyclohexyl- <u>N</u> -tetrahydrofurfur-2-yl-	78
6543	-----, <u>N</u> -[2-(2- <u>o</u> -octadecyl- <u>l</u> -imidazolin-1-yl)ethyl]-, acetate	57
3454	Acetanilide, <u>N</u> -2-benzothiazolyl-	35
5857	Benzamide, 3,5-methylenedioxy- <u>N</u> , <u>N</u> -dipentyl-	94
5856	-----, 3,4-methylenedioxy- <u>N</u> , <u>N</u> -dipropyl-	97
5328	Decanediamide, <u>N</u> , <u>N</u> '-diethylene-	-12
4974, 6335		85, 60
7062	2-Furamide	85
3259	2-Furanilide	87
6099	Hexahydro-vic-triazine, 1,2,4-triacryloyl-	97
4805	Morpholine, 4-butyryl-	83
4807	-----, 4-hexanoyl-	88
3714	-----, 4-(phenylacetyl)-	55
3424	Nicotinamide, <u>N</u> -cyclohexyl-	51

TABLE I

Code No.	Classification and Name	K Value
AMIDES		
Monosubstituted		
Heterocyclic Compounds		
6126	2-Picoline, 6-acetamido-	85
6504	-----, 6-benzamido-	97
6127	3-Picoline, 2-acetamido-	84
6507	-----, 2-benzamido-	98
6128	4-Piccline, 2-acetamido-	65
6692	Piperazine, 1-acetyl-4-dodecyl-	79
6693	-----, 1,4-dilauroyl-	43
3266	Piperidine, 1-benzoyl-3-[4-(N-methylbenzamido)butyl]-	89
6125	Pyridine, 2-acetamido-	96
3974	Thiazole, 2-acetamido-4,5-bis(acetoxymercuri)-	95
5127*	-----, 2-acetamido-4-methyl-	96
5119	-----, 2-acetamido-5-methyl-	96
4328	s-Triazine, 2,4-diacetamido-6-phenyl-	29
Hydrazides		
6097	Oxamic acid, allyl-, 2,2-dimethylhydrazide	92
5770	-----, phenylhydrazide	99
5514	Phenaceturic acid, hydrazide	97
Imides		
4827	Acrylamide, N-(phthalimidomethyl)-	61
6741	Maleimide, N-tert-butylcarbamoyl-	85
6740	-----, N-carbamoyl-	87
4817	Phthalimide, 4-acetamido-	55
7099	Succinimide, N-carbamoyl-	42
Imines		
5029	Acetamide, N-(9-phenyliminofluoren-2-yl)-	63
5031	p-Acetotoluidide, $\gamma$ -(2-fluorenylimino)-	40
Iodonium Compounds		
Iodonium compounds.		
3429	bis(acetamidophenyl)----- chloride	(T)
3546	bis(lauramidophenyl)----- iodide	20
Ketones		
5416	Acetamide, N-(9-oxo-2-fluorenyl)-	93
4241	-----, 2-phenyl-N-(1-phenylphenacyl)-	-48
4810*, 6130	Acetanilide, 3'-acetyl-	71
6120	-----, 4'-acetyl-	76
6105	-----, 4'-benzoyl-	82

TABLE I

Code No.	Classification and Name	K Value
AMIDES		
Monosubstituted		
Ketones		
5342	Acetoacetamide, <u>N,N'</u> -ethylenebis-	-25
5348	-----, <u>N,N'</u> -(4-methylphenylene)bis-	88
4014	Acetoacetanilide	28
5926	-----, 4',4"-methylenebis-	78
5953A	-----, 2'-phenyl-	60
5422	Benzamide, <u>N</u> -(9-oxo-2-fluorenyl)-	-54
4240	-----, <u>N</u> -( $\alpha$ -phenylphenacyl)-	-173
3611	Isatin, 1-acetyl-	17
3196	Levulinamide, <u>N,N</u> -diethyl-	62
6108	Propionanilide, 4'-acetyl-	85
6115	-----, 4'-benzoyl-	65
Nitriles		
4858, 5563	Acetamide, 2-cyano-	32, 9
5519	-----, <u>N</u> -cyanomethyl-2,2-diphenyl-	90
6765	Acrylamide, 3-cyano-	96
3778, 4853	Quinaldonitrile, 1-benzoyl-1, $\omega$ -dihydro-	47, 64
Nitro Compounds		
5059	Acetanilide, 2',4'-dinitro-	100
6016	-----, <u>N</u> -methyl-4'-nitr-	57
5047	-----, 3'-nitro-	86
4403	Benzamide, <u>N</u> -benzyl-p-nitro-	95
4658	-----, <u>N</u> -butyl-p-nitr	73
4659	-----, <u>N</u> -sec-butyl-p-n	94
4400	-----, <u>N</u> -cyclohexyl-m-nitro-	74
4668	-----, <u>N,N</u> -dibenzy1-p-nitro-	-2
4390	-----, <u>N,N</u> -diehyd-p-nitr	91
4666	-----, <u>N,N</u> -disbutyl-p-nitro-	90
4401	-----, <u>N,N</u> -dis propyl-m-nitro-	91
4394	-----, <u>N,N</u> -dispropyl-p-nitro-	85
4398	-----, <u>N</u> -isobutyl-m-nitro-	86
4660	-----, <u>N</u> -isobutyl-p-nitr	84
4392	-----, <u>N</u> -isopropy1-p-nitr	87
4393	-----, <u>N</u> -methyl-p-nitro-	92
4395	-----, p-nitro- <u>N,N</u> -dipropl-	90
4663	-----, p-nitro- <u>N</u> -pentyl-	89
3715	-----, <u>N</u> -(p-nitrophen-thyl)-	71
4391	-----, p-nitro- <u>N</u> -propyl-	92
6437	Benzanilide, 2',4'-dinitr	93
6434	-----, 2'-nitr	67
6435	-----, 3'-nitro-	-31
6436	-----, 4'-nitro-	4

TABLE I

Code No.	Classification and Name	K Value
AMIDES		
Monosubstituted		
	Nitro Compounds	
6186	Butyranilide, 2'-nitro-	41
5068	-----, 3'-nitro-	99
5069	-----, 4'-nitro-	98
5962	Phthalamide, <u>N,N'</u> -bis( <u>o</u> -nitrophenyl)-	47
5967	-----, <u>N,N'</u> -dicyclohexyl-, 3-nitro-	37
5969	-----, 3-nitro-, <u>N,N'</u> -dipentyl-	47
5971	Phthalanilide, <u>N,N'</u> -dibutyl-3-nitro-	24
5970	-----, 3-nitro- <u>N,N'</u> -dipentyl-	31
4419, 6111	Propionanilide, 2',4'-dinitro-	97, 96
5058	-----, 2'-nitro-	94
5057	-----, 3'-nitro-	91
	Phenols	
7059	Acetamide, 2-salicylidene-	0
6011	Acetanilide, 4'-hydroxy-	7
2914	2-Anthranilide, 3-hydroxy-	11
4425	1-Naphthalenepropionamide, <u>N</u> -cyclohexyl- 2-hydroxy-	35
4937	3-Naphthamide, <u>N</u> -cyclohexyl-2-hydroxy-	81
7052	Salicylamide	86
4465	copper(II) derivative	96
6490	-----, <u>N</u> -butyl-3-cyclohexyl-	50
7180	-----, <u>N</u> -cyclohexyl-	95
7182	-----, <u>N</u> -1-naphthyl-	41
5946	-----, 3-phenyl-	71
3388	Salicylanilide	50
3355	Salicylo- <u>o</u> -toluidide	52
	Thioureas	
5648	Acetamide, 2-[ <u>(2-imidazolin-2-yl)thio</u> ]-, picrate	96
5635	?-Pseudoureaacetamide, 2-thio-, hydrochloride	60
3484	2-Pseudoureapropionamide, 2-thio-, hydrochloride	40
	Miscellaneous	
5052	Acetamide, <u>N</u> -2-anthraquinonyl-	58
3706	Acetanilide, <u>p</u> -formyl-, thiosemicarbazone	37
6019	-----, 2-mercaptop-	33
5670	-----, 4'-thiocyanato-	31
6401*	Ammonium compounds. ethylenebis[(aminocarbonylmethyl)dimethylx-(1-methylheptyl)benzyl]----- chloride	39

TABLE I

Code No.	Classification and Name	K Value
AMIDES		
Monosubstituted		
Miscellaneous		
3771	1,3-Benzoxazine, 1-acetyl-4-oxo-2-phenyl-	66
5336	Bisurea, <u>N,N</u> -sebacoyl-	<u>19</u>
5173	Carbohydrazide, 1-carbamoyl-	54
5321	-----, 1-carbamoyl-3-thio-	21
5452	Disulfide, bis[(2-acetamidoethyl)aminothio-carbamoyl]	66
5130	4,4'-Ditolyl sulfone, 3,3'-diacetamido-	39
6690	Hexananimide, 4'-sulfamoyl-	59
7109	Octanamide, <u>N,N'</u> -ethylenebis[ <u>N</u> -nitroso-	36
5456	2-Thiazolidinethione, 3-ethylcarbamoyl-	<u>95</u>
Disubstituted		
Acid-Halides		
3451	Caproic acid, $\epsilon$ -benzamido- $\alpha$ -bromo-	85
5485	Maleanic acid, 3-chloro-	80
7094	Phthalamic acid, <u>N</u> -(3,4-dichlorophenyl)-	<u>91</u>
Acid-Heterocyclic Compounds		
5880	7-Oxabicyclo[2.2.1]heptane-2-carboxylic acid,	
	3-(1-naphthylcarbamoyl)-	83
5944	-----, 3-(4H-1,2,4-triazol-3-ylcarbamoyl)-	58
Acid-Nitro Compounds		
2759	L-Glutamic acid, <u>N</u> -(m-nitrobenzoyl)-	41
5531*	Phthalanilic acid, 2'-nitro-	95
5532	-----, 4'-nitro-	55
Alcohol-Halides		
5129*	Acetamide, 2-chloro- <u>N</u> -decyl- <u>N</u> -(2-hydroxyethyl)-	95
7214	-----, 2-(p-chlorophenyl)- <u>N</u> -(2-hydroxyethyl)-	69
7144*	2-Propanol, 3-benzamido-1,1-trichloro-	<u>94</u>
Amine-Ethers		
4940	Acetamide, 2-(6-methoxy- <u>m</u> -toluidino)-	74
4838*	p-Acetanisidide, 2'-amino-	<u>97</u>
Amine-Halides		
4939	Acetamide, 2-( <u>m</u> -bromoanilino)-	95
4941	-----, 2-( <u>m</u> -chloroanilino)-	<u>66</u>

TABLE I

Code No.	Classification and Name	K Value
AMIDES		
Disubstituted		
Amine-Heterocyclic Compounds		
2710	Phenothiazine, 10-benzoyl-3,7-bis(dimethylamino)-	-6
5701	s-Triazine, 4-[ <u>(2-acetamidoethyl)amino</u> ]-2,6-diamino-	43
5699	2-s-Triazineacetamide, 4,6-diamino-	42
Azo-Halides		
4442	Benzanilide, 4-chloro-4'-phenylazo-----,	25
4689	2,4-dichloro-4'-phenylazo-----,	16
Ester-Halides		
4414	Oxanilic acid, 4'-chloro-, ethyl ester-----,	73
5931	3'-chloro-, isopropyl ester	35
Ester-Nitriles		
5335	Acrylic acid, 3-( <u>p-acetamidophenyl</u> )-2-cyano-, ethyl ester	-15
5515	Phenaceturic acid, $\alpha$ -cyano-, ethyl ester	59
Ether-Halides		
3576	Acetamide, 2-(2,4-dichlorophenoxy)-	89
4912	Acetanilide, 3'-chloro-2-(pentachlorophenoxy)-	18
6131	<u>o</u> -Acetanisidide, 5'-chloro-	53
5039	<u>p</u> -Anisanilide, 4'-bromo-----,	50
4783, 4992	2'-chloro-----,	70, 21
4784, 4993	3'-chloro-----,	55, 53
4785, 4994	4'-chloro-----,	35, 59
4782, 4995	2',5'-dichloro-----,	-31, 51
6200	Benzanilide, 2'-bromo-2-ethoxy-----,	2
6201	4'-bromo-2-ethoxy-----,	-8
6197	2'-chloro-2-ethoxy-----,	-38
6198	3'-chloro-2-ethoxy-----,	-44
6199	4'-chloro-2-ethoxy-----,	-185
6202	2',5'-dichloro-2-ethoxy-----,	72
4438	<u>o</u> -Benzanisidide, 2,4-dichloro-----,	33
4453	<u>p</u> -Benzanisidide, 2-chloro-----,	82
4439	2,4-dichloro-----,	54
4911	3,4-dichloro-----,	15
Ether-Nitro Compounds		
4762, 4996	<u>p</u> -Anisanilide, 2'-nitro-----,	22, 39
4998	4'-nitro-----,	64
5972	Phthalamide, <u>N,N'</u> -bis( <u>p-methoxyphenyl</u> )-3-nitro-----,	44

TABLE I

Code No.	Classification and Name	K Value
AMIDES		
Disubstituted		
	Ether-Phenols	
5943	m-Anisamide, 6-hydroxy-N-methyl-	27
6253	Salicylo-p-phenetidide	25
	Halide-Ketones	
2922	Acetoacetanilide, 4'-chloro-	71
5749	-----, 4,4,4-trifluoro-	64
	Halide-Nitro Compounds	
4771	Benzanilide, 2-chloro-3'-nitro-	49
4772	-----, 2-chloro-4'-nitro-	46
4415	-----, 3'-chloro-3-nitro-	56
4446	-----, 4-chloro-2'-nitro-	64
4435	-----, 4-chloro-3'-nitro-	42
4747	-----, 4-chloro-4'-nitro-	56
4680	-----, 4'-chloro-4-nitro-	45
4431	-----, 2,4-dichloro-2'-nitro-	53
4904	-----, 2,4-dichloro-3'-nitro-	23
5769	Formanilide, 2'-chloro-4'-nitro-	96
	Halide-Phenols	
6501	Salicylamide, N-allyl-5-chloro-	99
6720	-----, N-benzyl-5-chloro-	83
6484	-----, 5-bromo-N,N-dimethyl-3-phenyl-	5
6506	-----, N-butyl-5-chloro-	99
6508	-----, N-sec-butyl-5-chloro-	93
6535, 6714	-----, N-tert-butyl-5-chloro-	99, 25
6534, 6713	-----, 5-chloro-	97, 95
6505	-----, 5-chloro-N-ethyl-	91
6717	-----, 5-chloro-N-heptyl-	96
6716	-----, 5-chloro-N-hexyl-	94
6503	-----, 5-chloro-N-isobutyl-	99
6502	-----, 5-chloro-N-isopropyl-	93
6500	-----, 5-chloro-N-methyl-	97
6718	-----, 5-chloro-N-octyl-	90
6715	-----, 5-chloro-N-pentyl-	93
6509	-----, 5-chloro-N-propyl-	93
6722	Galicylanilide, 5-chloro-	73
6780	-----, 4',5-dibromo-	75
6723	-----, 2',5-dichloro-	32
6724	-----, 3',5-dichloro-	92
6725	-----, 4',5-dichloro-	38
6726	-----, 2',5,5'-trichloro-	38

TABLE I

Code No.	Classification and Name	K Value
AMIDES		
Disubstituted		
	Halide-Phenols	
6731	Salicylo- <u>m</u> -toluidide, 5-chloro-	79
6730	Salicylo- <u>o</u> -toluidide, 5-chloro-	89
6732	Salicylo- <u>p</u> -toluidide, 5-chloro-	72
	Heterocyclic-Nitro Compounds	
2798	2-Furamide, 5-nitro-	95
4397	Morpholine, 4-( <u>m</u> -nitrobenzoyl)-	96
5132	Thiazole, 2-acetamido-4-methyl-5-nitro-	96
	Miscellaneous	
5147	Acetamide, <u>N</u> -butyl-2-(pentachlorophenylthio)-	51
5015	-----, <u>N</u> -(cyanoamidino)-	67
4115	-----, 2-(2-hydroxyethoxy)-	28
3644	Acetanilide, 4'-sulfamoylthiazol-2-yl-	-35
5040	-----, 2,2,2-trichloro-4'-sulfamoyl-	91
6648	p-Acetanisidine, 2'-acetyl-	87
7263	Acetic acid, [ <u>o</u> -( <u>N</u> -allylcarbamoyl)phenoxy]-	-14
3274	Anthraquinone, 1-benzamido-4-chloro-	7
3977	Benzaldehyde, <u>p</u> -acetamido-, (2-benzothiazolyl)-hydrazone	-15
4178	Benzamide, <u>N</u> -homopiperonyl-3,4,5-trimethoxy-	45
4986, 5126	-----, <u>N</u> -(2-hydroxyethyl)- <u>p</u> -nitro-	77, 92
3774	1,3-Benzoxazine, 1-acetyl-2-trichloromethyl-4-oxo-	-50
7047	Butyraldehyde, $\alpha,\alpha,\beta$ -trichloro-, and propionamide	95
5754	Butyric acid, 4-(2-formamidoethylsulfonyl)-	27
6760	Fumaramic acid, <u>N</u> -formyl-	64
3805	2-Furanacrylamide, $\alpha$ -cyano-	71
2860	D-Glucoanilide, <u>N</u> -sulfamoyl-	-21
	Iodonium compounds.	
3123	bis(acetoacetamidophenyl)----- iodide	83
4544	Isonicotinamide, <u>N</u> -(3-guanylguanidino)-	90
5832	Maleimide, <u>N</u> -(2-acetamidoethyl)-2,3-dichloro-	95
5516	Malonic acid, (2-phenylacetamido)-, monoethyl ester, sodium salt	45
6315	Phthalanilic acid, 4'-(acetylsulfamoyl)-, dihydrate	21
5269	Phthalimide, <u>N</u> -[ <u>p</u> -(methylcarbamoyl)anilinomethyl]-	74
6046	1,4-Phthalazinedione, 2,3-dihydro-5-( <u>p</u> -nitrobenzamido)-	-2
7213	Quinoline, 5-acetamido-3-thioacetyl-	60
6470	Salicylamide, <u>N</u> -butyl-3-cyclotriphosphyl-5-nitro-	51
7110	Semicarbazide, 1-( <u>L</u> -chlorobenzoyl)-	13

TABLE I

Code No.	Classification and Name	K Value
AMIDES		
Disubstituted		
Miscellaneous		
6762	Succinimide, $\alpha$ -acetoxymethio-N-carbamoyl- $\omega$ -pentyl-	64
5004	Thiazole, 2-(2,2,2-trichloroacetamido)-	64
5521	Valine, N-acetyl-3-mercaptop-	34
Polysubstituted		
4469	Ethanol, 2,2,2-trichloro-1-salicylamido-	80
2800	2-Naphthamide, 1,2,3,4-tetrahydro-6-hydroxy- 4-(4-hydroxy-3-methoxyphenyl)-3-hydroxymethyl- 7-methoxy-, from $\alpha$ -conidendrin	18
6638	Nicotinanilide, 4'-sulfanilyl-	64
6719	Salicylamide, 5-chloro-N-(2-hydroxyethyl)-	84
6721	-----, 5-chloro-N-(3-hydroxypropyl)-	94
6727	Salicylanilide, 5-chloro-2'-nitro-	95
6728	-----, 5-chloro-3'-nitro-	97
6729	-----, 5-chloro-4'-nitro-	99
6639	Succinanilic acid, 4'-[p-(2,5-dimethyl-1- pyrrolyl)phenylsulfonyl]-	53
AMIDINES		
Substituted		
5881	Benzamidine, p-chloro-, hydrochloride	87
6635	-----, p-(methylsulfonyl)-, monohydrochloride	63
6623	Benzoic acid, p-amidino-, ethyl ester hydrochloride	79
4544	Isonicotinamide, N-(3-guanylguanidino)-	90
2981	Urea, amidino-, monosulfate	82
AMINES		
Unsubstituted		
Primary		
3589	Abietylamine, compound with 1/3 f. wt. boron trifluoride	65
3587	Allylamine, compound with 1 f. wt. boron trifluoride	95

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Code No.	Classification and Name	K Value
AMINES		
Unsubstituted		
	Primary	
4796	Aniline, <i>x</i> -butyl-	96
3146	compound with 1 f. wt. boron trifluoride	44
3727	compound with 1 f. wt. <i>x,x,x</i> -trinitrostilbene	64
4797	----, <i>x,x</i> -dibutyl-	82
7299*	----, 4,4'-methylenebis-	83
2708	salt with 1 f. wt. fluosilicic acid	91
6037	Bicyclo[3.3.1]hept-3-en-2-amine, <u>d</u> -2,6,6-tri-methyl-	91
5253*	----, 1-4,6,6-trimethyl-	97
3742, 6065	[Bicyclohexyl]-2-amine	90, 94
3043	2-Biphenylamine	93
4019	4-Biphenylamine	99
2719	Butylamine, salt with 1 f. wt. fluosilicic acid	90
6806	1,2-Cyclohexanediamine	62
3463	Cyclohexylamine, hydrogen phosphate	98
6803*	----, 4-nonyl-	98
2720	salt with 1 f. wt. fluosilicic acid	91
6461	salt with <u>O</u> -butyl- <u>S</u> -carboxymethyl xanthate	73
3359	1,10-Decanediamine	89
3035, 4253	Dodecyline	86, 98
3147	compd. with 1 f. wt. boron trifluoride	67
3148	compound with 1/2 f. wt. boron trifluoride	90
3149	compound with 1/3 f. wt. boron trifluoride	96
3595	compound with 1/4 f. wt. germanium tetrachloride	93
5131	p-toluenesulfonate	87
3532	Hexadecylamine	93
3150	compound with 1 f. wt. boron trifluoride	67
3151	compound with 1/2 f. wt. boron trifluoride	97
3152	compound with 1/3 f. wt. boron trifluoride	96
2714	1,6-Hexamediamine, salt with 1 f. wt. fluosilicic acid	66
3919	Hexylamine, 1-methyl-	93
2712	Isopropylamine, salt with 1 f. wt. fluosilicic acid	83
3951	Methylamine, salt with <u>4,6-dinitro-<i>o</i>-cresol</u>	95
2711	salt with 1 f. wt. fluosilicic acid	92
4092	Naphthenylamine	99
4093	acetate	84
4094	hydrochloride	31
4095	picrate	92
4259*	Octadecylamine	96
3156	compound with 1 f. wt. boron trifluoride	22
3157	compound with 1/2 f. wt. boron trifluoride	71
2718	salt with 1 f. wt. fluosilicic acid	76

TABLE I

Code No.	Classification and Name	K Value
AMINES		
Unsubstituted		
Primary		
3145	Octylamine, compound with 1 f. wt. boron trifluoride	76
2706	salt with 1 f. wt. fluosilicic acid	<u>87</u>
2723	1-Phenanthrenemethylamine, salt with 1 f. wt. fluosilicic acid	91
2724, 3873	m-Phenylenediamine, compound with 1 f. wt. 1,3,5-trinitrobenzene	96, 95
3588	Propylamine, compound with 1 f. wt. boron trifluoride	55
3581	Rosin amine D, salt with 1 f. wt. 2-sec-butyl-4,6-dinitrophenol	100
3059	salt with 1 f. wt. fluosilicic acid	88
4536	Tetradecylamine	25
5153	compound with 1/4 f. wt. boron trichloride	100
3153	compound with 1 f. wt. boron trifluoride	41
3154	compound with 1/2 f. wt. boron trifluoride	98
3155	compound with 1/3 f. wt. boron trifluoride	79
4692	compound with 1 f. wt. 1,3,5-trinitrobenzene	94
2709	<u>o</u> -Toluidine, salt with 1 f. wt. fluosilicic acid	94
3720	p-Toluidine, $\alpha,\alpha,\alpha$ -triphenyl-	-3
2918	2,5-Xylylidine, 4,4'-methylenebis-	-21
Secondary		
7187	Aniline, N-allyl-	95
5952	-----, N-butyl-, hydrochloride	92
5953	-----, N-isopentyl-, hydrochloride	39
4901	Benzidine, N,N'-di-sec-butyl-	36
3650	-----, N,N'-di(2-naphthyl)-	43
3486	Benzylamine, N-cyclohexyl-	57
3487	-----, N-(2-methylcyclohexyl)-	32
6455*	2-Butyne-1,4-diamine, N,N'-bis(1,1,3,3-tetramethylbutyl)-	25
3498	Cyclohexylamine, N-allyl-	25
3490	-----, N-ethyl-	30
3497	-----, N-isopropyl-	20
3488	-----, N-methyl-	73
3495	-----, 2-methyl-N-propyl-	23
3493	-----, N-pentyl-	26
3496	-----, N-phenyl-	20
3491	-----, N-propyl-	20
6452*	Dibutylamine, 1-ethynyl-	21
2707	salt with 1 f. wt. fluosilicic acid	34
3465	Dicyclohexylamine, dihydrogen phosphide	23
3144	Diethylamine, compound with 1 f. wt. boron trifluoride	45
7256	Dimethylamine, compound with nitrogen	21

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Code No.	Classification and Name	K Value
AMINES		
Unsubstituted		
Secondary		
3171	Dodecylamine, <u>N</u> -phenethyl-	99
4836, 5988	Ethylenediamine, <u>N,N'</u> -dibenzyl-	88, <u>81</u>
3524	-----, <u>N,N'</u> -di(loralkyl)-	54
2722	Nonylamine, salt with 1 f. wt. fluosilicic acid	95
3173	Phenethylamine, <u>N</u> -cyclohexyl-	96
3172	-----, <u>N</u> -hexyl-	98
7280*	p-Phenylenediamine, <u>N</u> -cyclohexyl- <u>N'</u> -phenyl-	78
3019, 7284	-----, <u>N,N'</u> -diphenyl-	46, 15
5954	p-Toluidine, hydrochloride	97
Tertiary		
4311	Aniline, 4,4'-benzylidenebis[ <u>N,N</u> -dimethyl-	88
4185	-----, 4,4'-heptylidenebis[ <u>N,N</u> -dimethyl-	26
4310	-----, 4,4'-(p-methylbenzylidene)bis[ <u>N,N</u> -dimethyl-	91
6547	-----, <u>N,N'</u> -methylenebis[ <u>N</u> -ethyl-	73
4184	-----, 4,4',4"-methylidynetris[ <u>N,N</u> -dimethyl]-	5
2705	Benzidine, <u>N,N,N',N'</u> -tetraethyl-	9
3517	Benzylamine, <u>N</u> -cyclohexyl- <u>N</u> -isopropyl-	90
3515	-----, <u>N</u> -cyclohexyl- <u>N</u> -methyl-	34
3020	-----, <u>N</u> -cyclohexyl- <u>N</u> -pentyl-	90
3509	-----, <u>N</u> -cyclohexyl- <u>N</u> -phenyl-	53
2713	-----, <u>N,N</u> -dimethyl-, salt with 1 f. wt. fluo- silicic acid	80
4021	-----, <u>N</u> -ethyl- <u>N</u> -phenyl-	25
6038	Bicyclo[3.3.1]hept-3-en-2-amine, <u>1-cis</u> - <u>N,N</u> ,4,6,6-pentamethyl-	87
6042	-----, <u>1-N,N</u> ,2,6,6-pentamethyl-	31
6039	-----, d-trans- <u>N,N</u> ,4,6,6-pentamethyl-	91
6769	2,2'-Biphenyldiamine, <u>N,N,N',N'</u> -tetramethyl-	26
5428	2-Butene-1,4-diamine, <u>N,N,N',N'</u> -tetramethyl-	37
6288	Cyverine, hydrochloride	93
3507	Dibenzylamine, <u>N</u> -cyclohexyl-	80
3494	Dicyclohexylamine, <u>N</u> -methyl-	88
3522	Dodecylamine, <u>N,N</u> -dibutyl-	71
4066	-----, <u>N,N</u> -dimethyl-	27
3531	Ethylenediamine, <u>N,N,N',N'</u> -tetrahexyl-	60
6453	2-Heptyne-1,4-diamine, <u>N,N,N',N'</u> -tetramethyl-	26
3538	Loralkylamine, <u>N</u> -cyclohexyl- <u>N</u> -pentyl-	93
3032	Methanediamine, <u>N,N,N',N'</u> -tetrabutyl-	94
4255	Octadecylamine, <u>N,N</u> -dimethyl-	86
4254	Oleylamine, <u>N,N</u> -dimethyl-	23
6453*	6,9-Tetradecanediamine, <u>N,N,N',N'</u> ,2,2,4,11,13,13- decamethyl-	22

TABLE I

Code No.	Classification and Name	K Value
AMINES		
Unsubstituted		
Tertiary		
6457*	7-Tetradecyne-6,9-diamine, <u>N,N,N',N'</u> ,2,2,- 4,11,13,13-decamethyl-	94 2
7255	Trimethylamine, compound with diborane	
3269	Trioctylamine	77
3331	Tripentylamine, compound with 1 f. wt. boron tri- fluoride	95
6382	m-Xylene- $\alpha,\alpha'$ -diamine, <u>N,N,N',N'</u> -tetraethyl- 2,4,6-trimethyl-	88 <u>  </u>
Mixed		
6454	2-Butyne-1,4-diamine, <u>N,N</u> -dimethyl- <u>N'</u> -(1,1,3,3- tetramethylbutyl)-	94
3024	Diethylenetriamine, 1(or 4?)-alkyl- ----, 1(?)-dodecyl-	89
3518	crude	87
3521	----, 1(?)-tetradecyl-	93
3519	Ethylenediamine, <u>N</u> -loralkyl-	95
3520	p-Phenylenediamine, <u>N</u> -phenyl-	78
7289*		76
Monosubstituted		
Acids		
4495	Acetic acid, p-aminophenylmercury(II) salt	100 <u>  </u>
3348	----, (ethylenediamine)tetra-, disodium salt, dihydrate	-34
3349	trisodium salt, monohydrate	-115
5753	----, 1-phenyliminoli-	55
3093	Anthranilic acid, nickel(II) salt	26
3516	Glycine, 1-cyclohexyl-	47
4339	2-Naphthoic acid, 3-amino-, hydrochloride	81
3264	Octanoic acid, 2-amino-	47
Alcohols		
6475	5-Acenaphthenemethanol, $\alpha$ -(dipropylaminomethyl)-	92
6624	x-Apocynin ethanol, dihydrochloride	97
2388	Benzhydrol, 4,4'-bis(dimethylamino)-	81
3609	1-Butanol, 2-amino-	47
5154	2-Butanol, 4-tetradecylamine-	88
5155	salt with 1 f. wt. propionic acid	85
3153	Dodecylamine, <u>N,N</u> -bis(2-hydroxyethyl)-, compound with 1 f. wt. boron trifluoride	73
3159	compound with 1/2 f. wt. boron trifluoride	93
3170	compound with 1/3 f. wt. boron trifluoride	82

TABLE I

Code No.	Classification and Name	K Value
AMINES		
Monosubstituted		
	Alcohols	
2704	Ethanol, 2,2'-aminobis-, salt with 1 f. wt. fluosilicic acid	74
7258	-----, 2-(2-aminoethylamino)-, dihydrochloride	1
4800	-----, 2-[o(and p)-aminophenyl]-, hydrochloride	31
4812*	-----, 2-(N-butyylanilino)-	92
5128	-----, 2-(2-methyl-1-naphthylamino)-	98
5332	-----, 2,2'-(2,5-xylidino)bis-	47
6445*	4-Heptanol, 1-dimethylamino-5-ethyl-	86
6663	1-Naphthalenemethanol, $\alpha$ -(3-diheptylaminopropyl)-	91
6539	-----, $\alpha$ -(2-dipentylaminoethyl)-, hydrochloride	95
6650	-----, $\alpha$ -(1-dipropylaminoethyl)-, hydrochloride	91
6447	4-Nonanol, 1-dimethylamino-6,8,8-trimethyl-	86
3164	Octylamine, N,N-bis(2-hydroxyethyl)-, compound with 1/3 f. wt. boron trifluoride	73
6469	9-Phenanthrenemethanol, $\alpha$ -(diisopentylamino- methyl)-1,2,3,4-tetrahydro-, hydrochloride	92
3296	Phenethyl alcohol, p-amino-	31
6366	1,3-Propanediol, 2-amino-2-methyl, salt with 1 f. wt. neoabietic acid	62
6088	1,2-Propanediol, 3-(N-allylanilino)-	70
4820	-----, 3,3'-(1-naphthylamino)bis-	38
2715	2-Propanol, 2,2'-aminobis-, salt with 1 f. wt. fluosilicic acid	85
4819	-----, 1,1'-anilinobis-	51
6060	-----, 1,3-bis(dimethylamino)-, dihydrochloride	56
2856	-----, 1-cyclohexylamino-	75
6629	3-Retenemethanol, $\alpha$ -(1-dibutylaminoethyl)-, hydrochloride	93
6630	-----, $\alpha$ -(1-dihexylaminoethyl)-, hydrochloride	77
6537	-----, $\alpha$ -(diisohexylaminomethyl)-, hydrochloride	65
3161	Tetradecylamine, N,N-bis(2-hydroxyethyl)-, compound with 1 f. wt. boron trifluoride	73
3162	compound with 1/2 f. wt. boron trifluoride	90
3163	compound with 1/3 f. wt. boron trifluoride	85
	Amides	
4304	Acetamide, 2-cyclohexylamino-	89
6122	Acetanilide, 4'-dimethylamino-	39
4331	-----, 4'-isobutylamino-	100
2915	2',4'-Benzoylisisopropylamino-	94
3130	Crotonanilide, N-bis-butyl-4'-( <i>tert</i> -butylamino)-	75
5109	Oleamide, N-(3-diethylaminopropyl)-	37
4316	Sebacamide, N,N-bis(2-aminoethyl)-	59

TABLE I

Code No.	Classification and Name	K Value
AMINES		
Monosubstituted		
	Azo Compounds	
6028	Aniline, 3,3'-azoxydi-	-52
4411	<u>o</u> -Toluidine, 4-( <u>o</u> -tolylazo)-	<u>91</u>
	Carbamates	
5461	Carbanilic acid, 2-amino-, isopropyl ester	76
5468	-----, 2-(diethylamino)ethyl ester	<u>93</u>
6251	-----, 1-(dimethylamino)prop-2-yl ester	59
	Esters	
3857	p-Aminobenzoic acid, butyl ester	46
3387	Anthranilic acid, methyl ester	49
5752	Crotonic acid, 3-(methylamino)-, allyl ester	71
5167	Methacrylic acid, 2-(diethylamino)ethyl ester	77
3268	Oxalic acid, ester with p-(dimethylamino)phenol	71
	Ethers	
4545	Allylamine, 2(or 3)-allyloxy- <u>N,N</u> -dimethyl-	83
6227	Aniline, 2,5-dimethoxy-	89
4564	-----, <u>p</u> -hexyloxy-, benzenesulfonate	<u>97</u>
4183	-----, 4,4'-( <u>p</u> -methoxy)benzylidenebis[ <u>N,N</u> -dimethyl-	83
3574	-----, 4,4'-oxydi-	32
3575	-----, <u>N</u> -(2-phenoxyethyl)-	66
5955	<u>o</u> -Anisidine, hydrochloride	71
4237	Benzidine, 3,3'-dimethoxy-	<u>96</u>
3444	Benzylamine, <u>N</u> -( <u>o</u> ,5-dimethoxyphenyl)-	1
7270	Bis( <u>p</u> -methoxyphenethyl)amine, phosphate	64
3094	Butylamine, 4-phenoxy-	<u>87</u>
4893	Dibenzylamine, <u>N</u> -[2-( <u>x,x</u> -diisopropyl- <u>m</u> -tolyloxy)-ethyl]-	75
4894	-----, <u>N</u> -[2-( <u>x,x</u> -diisopropyl- <u>o</u> -tolyloxy)ethyl]-	62
6062	Dodecylamine, <u>N</u> -( <u>p</u> -methoxybenzyl)-, hydrochloride	83
7160*	Ethane, 1,2-bis[ <u>p</u> -[(hexylmethylamino)methyl]-phenoxy]-, dihydrochloride	96
7196*	Hexane, 1,6-bis[ <u>p</u> -[(isopropylamino)methyl]phenoxy]-, dihydrochloride, 1 percent	100
7153	Propane, 1,3-bis[4-[ <u>(methylphenethylamino)methyl</u> ]-phenoxy]-, dihydrochloride	<u>99</u>
	Halides	
4803	Aniline, <u>N</u> -allyl- <u>o</u> -chloro-	30
2916	-----, 3,5-bis(trifluoromethyl)-	60
5861	-----, <u>m</u> -chloro-	<u>96</u>

TABLE I

Code No.	Classification and Name	K Value
AMINES		
Monosubstituted		
Halides		
4312	Aniline, 4,4'-( <u>p</u> -chlorobenzylidene)bis[N,N-dimethyl-	97
4233	-----, 2,4,6-tribromo-	89
4243	Benzidine, 3,3'-dichloro-, dihydrochloride	93
6290	1,3-Butanediamine, N <sup>3</sup> -( <u>p</u> -chlorophenyl)-N <sup>1</sup> -isopropyl-, monohydrobromide	95
6513	Dibenzylamine, 4-bromo-N-cyclohexyl-	57
3128	Ethylamine, 2-bromo-, hydrochloride	100
3982	Hexylamine, 6-bromo-N,N-diethyl-, hydrochloride	41
4745	2,4-Xyldine, α <sup>4</sup> -( <u>o</u> -chlorophenyl)-N-ethyl-α <sup>4</sup> -(4-ethylamino-3-methyl-2,5-cyclohexadienylidene)-, monohydrochloride	100
Heterocyclic Compounds		
6480	Antazoline, salt with methanesulfonic acid	74
4182	Bis(homopiperonyl)amine, hydrochloride	96
6831	Furfurylamine	94
6832	-----, tetrahydro-	74
5190	Guanazole, salt with 1/2 f. wt. oxalic acid	70
5152	Imidazoline, 1-(2-aminoethyl)-2-heptadecyl-	96
6238	Isoquinoline, 8-[3-(diethylamino)propyl]amino]-, dihydrochloride	96
6289	-----, 1-[3-(dihexylamino)propyl]amino]-, dihydrochloride	91
4738	Melamine, N <sup>2</sup> ,N <sup>2</sup> -bis(2-methylallyl)-	53
4485*	-----, N <sup>2</sup> ,N <sup>2</sup> -dimethyl-	95
4733	-----, N <sup>2</sup> -phenyl-	54
3422	Metanicotine	91
6236	2-Picoline, 6-amino-	93
6712	----- hydrochloride	91
6235	3-Picoline, 2-amino-	97
6237	4-Picoline, 2-amino-	100
6791	Piperazine, 1-(2-aminoethyl)-	24
6314	Piperidine, 3-[(diphenylmethyl)amino]-1-methyl-, dihydrochloride	96
5251	Purine, 2,6-bis(diethylamino)-	96
7114	Pyridine, 5-(2-anilinoethyl)-2-methyl-	86
3358	-----, 2,6-diamino-	32
3445	Pyrimidine, 2-amino-4,6-dimethyl-	69
4035	-----, 5-amino-5-methyl-1,3-bis(1-methylheptyl)-hexahydro-	100
5739	-----, 1-(3-aminopropyl)-2-heptadecyl-1,x,x,x-tetrahydro-	71

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Code No.	Classification and Name	K Value
AMINES		
Monosubstituted		
Heterocyclic Compounds		
2892	Quinoline, 2-[2,2-bis[p-(dimethylamino)phenyl]-ethyl]-	-34
632	-----, 8-[[6-(diethylamino)hexyl]amino]-2,6-dimethyl-, oxalate	<u>100</u>
6665	-----, 4-[(4-diethylamino-1-methylbutyl)amino]-6-(dimethylamino)-	82
2806	-----, 2-[p-(diethylamino)styryl]-	<u>100</u>
5191	1H-Tetrazole, 5-amino-	<u>61</u>
4338	s-Triazine, 4,6-bis(methylamino)-2-methyl-	<u>100</u>
4737	-----, 2,4-bis(methylamino)-6-phenyl-	
4337*	-----, 2,4-diamino-6-benzyl-	<u>89</u>
5702*, 5703	-----, 2,6-diamino-4-(tert-butylamino)-	<u>90</u> , <u>70</u>
4736	-----, 2,4-diamino-6-(2-cyclohexenyl)-	<u>90</u>
5605	-----, 2,6-diamino-4-[(2,4-diamino-s-triazin-4-yl)-amino]..	32
5598	-----, 2,6-diamino-4-[2-[(4-(2,6-diamino-s-triazin-4-yl)butyl)amino]but-2-yl]-	<u>96</u>
5599	-----, 2,6-diamino-4-[2-[(4-(2,6-diamino-s-triazin-4-yl)butyl)amino]prop-2-yl]-	55
5597	-----, 2,6-diamino-4-[2-[(2,6-diamino-s-triazin-4-yl)methyl]amino]but-2-yl]-	63
5600	-----, 2,6-diamino-4-[1-[(2,6-diamino-s-triazin-4-yl)methyl]amino]propyl]-	33
5607	-----, 2,6-diamino-4-[2-[(2,6-diamino-s-triazin-4-yl)methyl]amino]prop-2-yl]-	12
5596	-----, 2,6-diamino-4-[2-(dimethylamino)ethyl]-	34
5595	-----, 2,6-diamino-4-[(dimethylamino)methyl]-	33
4735*	-----, 2,4-diamino-6-isopropyl-	<u>97</u>
5760	-----, 2,4-diamino-6-methyl-	73
5767*	-----, 2,4-diamino-6-octadecyl-	23
5591*	-----, 2,6-diamino-4-pnenethyl-	<u>92</u>
4336	-----, 2,4-diamino-6-phenyl-	83
4734	-----, 2,4-diamino-6-piperidino-	91
4739	-----, 2,2'-o-phenylenebis[4,6-diamino-	84
5603	-----, 2,4,6-tri(isopropylamino)-	<u>100</u>
6770	-----, 1,3,5-tris[x-(dimethylamino)propyl]hexahydro-	1
5610	-----, 2,4,6-tris[(1,1,3,3-tetramethyl)butylamino]-	33
6086	1,2,4-Triazole, 3-amino-	26
5817	1H-1,2,4-Triazole, 4-amino-	43
5122*	-----, 3-amino-, picrate	<u>100</u>
5884	-----, 4-amino-3,5-diethyl-	<u>55</u>
5340	-----, 4-amino-3,5-dimethyl-	41
5883	monohydrochloride	50

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Code No.	Classification and Name	K Value
AMINES		
Monosubstituted		
Hydrazines and Derivatives		
5807	Hydrazine, (2-aminoethyl)-, monooxalate	64
6979	1,4-Phthalazinedione, 5-amino-2,3-dihydro-	42
Hydroxylamines		
2986	2-Butanone, 3,3'-(ethylenedinitrilo)di-, dioxime	-32
2988	----, 3,3'-(o-phenylenedinitrilo)di-, dioxime	61
5876	Propionaldehyde, 2-(dimethylamino)-2-methyl-, oxime	98
Imides		
5768	Maleimide, N-anilino-	68
4818	Phthalimide, o-aminoc-	66
6478	----, N-(5-amino-2-methylbenzyl)-	20
5262	----, N-(anilinomethyl)-	60
5266	----, N-[4-biphenylamino)methyl]-	32
5260	----, N-(m-toluidinomethyl)-	16
5263	----, N-(2,4-xylidinomethyl)-	38
5267	----, N-(2,5-xylidinomethyl)-	70
4824	Succinimide, $\alpha$ -anilino-N-phenyl-	-4
Imines		
6040	2-Fluorenamine, N-[p-dimethylamino)benzylidene]-	53
4315	p-Phenylenediamine, N-benzylidene-	98
Ketones		
7194	Acetophenone, 4'-amino-	94
5323	Benzophenone, 4,4'-diamino-	91
3265	d-Camphor, 3-amino-, monosulfate	42
4309	Chalcone, 4-(dimethylamino)-	73
6027	$\beta$ -Fluorenone, 2-amino-	79
5414	----, 2-(methylamino)-	39
6446	2-Pentanone, 4-ethyl-3-(dimethylamino)-	77
3455	2-Pentenophenone, 3-amino-	79
3031	2-Propanone, 1-diethylamino-	33
6541	1-Propanone, 1-(7-isopropyl-1-methyl-3-phenylanthryl)-2-(diethylamino)-, hydrochloride	45
5353	2'-Propionaphthone, 3-(dimethylamino)-, hydrochloride	63
3134	Propiophenone, 4'-amino-	23
Lactams		
3615	$\beta$ -Pyrrolizidine, 3-amino-1-phenyl-	53
6370	4(3H)-Quinazolone, 3-[2-(diethylamino)ethyl]-, dihydrobromide	76

TABLE I

Code No.	Classification and Name	K Value
AMINES		
Monosubstituted		
Lactones		
2801	Phthalide, 3,3-bis[p-(dimethylamino)phenyl]-	-1
2802	-----, 3,3-bis[p-(dimethylamino)phenyl]-6-(dimethylamino)-	-239
Nitriles		
2808	Acetonitrile, bis[p-(dimethylamino)phenyl]phenyl-	3
5882	-----, (ethylenedinitrilo)tetra-	76
7078	Benzonitrile, o-amino-, hydrochloride	65
4486	Cyanamide, dibenzyl-	85
5101	Glycinonitrile, N,N-diethyl-	26
5993	Hydratroponitrile, β-(benzylamino)-, hydrochloride	80
5992	-----, β-(cyclohexylamino)-, hydrochloride	94
5989	-----, β-(dimethylamino)-, hydrochloride	85
6269	-----, β-(ethylamino)-, hydrochloride	96
6383	-----, β-(isopropylamino)-, hydrochloride	94
5090	Propionitrile, 3-anilino-	67
5096	-----, 3-(N-ethylanilino)-	86
5093	-----, 3-(o-ethylanilino)-	90
5927	-----, 2,2'-(ethylenedimino)bis[2-methyl-	11
4856	-----, 3-(isopropylamino)-, salt with 1 f. wt. pentachlorophenol	
5094	-----, 3-(N-methylanilino)-	92
6408	-----, 3-(octadecylamino)-	74
Nitro Compounds		
4754	Aniline, N-allyl-2,4-dinitro-	88
4361	-----, N-ethyl-2,4-dinitro-	97
4307	-----, 4,4'-(p-nitrobenzylidene)bis[N,N-dimethyl-	51
4044	Benzylamine, N-(2-methyl-2-nitropropyl)-N-phenyl-	56
352:	Cyclohexylamine, N-(2,4-dinitrophenyl)di-	81
4770	Dibenzylamine, N-(2,4-dinitrophenyl)-	32
3941	1,5-Pantanedianamine, 3,3-dinitro-, hydrochloride	82
5282	Toluene-2,4-diamine, 6-nitro-	96
6380	p-Tolidine, N,N-dimethyl-α-(2-nitro-9-fluorenylidene)-, low melting isomer	46
5281	-----, 3,5-dinitro-	78
6994	Triphenylamine, 2-nitro-	(T)
Nitroso Compounds		
4667	Aniline, N,N-dimethyl-p-nitroso-	99
3017	Benzylamine, N-cyclohexyl-N-nitroso-	83

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Code No.	Classification and Name	K Value
AMINES		
Monosubstituted		
	Phenols	
4239	9,10-Anthradiol, 1,4-diamino-	0
6659	<u>o</u> -Cresol, 4,6-bis(1-methylheptyl)- <u>a</u> -(dimethylamino)-	81
6656	-----, 4- <u>tert</u> -butyl-6-cyclohexyl- <u>a</u> -(dimethylamino)-	98
6661	-----, <u>a</u> -(dimethylamino)-x-dodecyl-	94
6660	-----, <u>a</u> -(dimethylamino)-4-(1-methylheptyl)-	100
6625	-----, <u>a</u> -(dimethylamino)-4-(1,1,3,3-tetramethylbutyl)-	
6621	Phenol, 2-amino-4-arsenoso-, hydrochloride	79
3994	-----, 4-anilino-2- <u>tert</u> -butyl-	95
6223	-----, p-(benzylamino)-	76
4814	-----, 2- <u>tert</u> -butyl-4-(butylamino)-	40
4346	-----, 2- <u>tert</u> -butyl-4-isopropyl-6-[ (dimethylamino)methyl]-	80
3262	-----, 2,4,6-triamino-, trihydrochloride	89
5412	Resorcinol, 5-amino-	95
4043	Salicylamine, N-phenyl-	63
6657	2,6-Xylenol, <u>a</u> -(diethylamino)-4-(1,1,3,3-tetramethylbutyl)-	45
6664	-----, <u>a</u> -(dimethylamino)-4-(1-methylheptyl)-	97
	Sulfones	
6637	Aniline, N-propyl-4,4'-sulfonyldi-	97
6239	-----, 4,4'-sulfonyldi-	75
6703	Dodecylamine, N-[p-(sulfanilyl)]-	-20
	Sulfonic Acids	
4248	2,2'-Biphenyldisulfonic acid, 4,4'-diamino-	-130
3450	3,3'-Biphenyldisulfonic acid, 4,4'-diamino-	79
5295	Metanilic acid, 6-(p-aminoanilino)-	50
3273	1,3,6-Naphthalenetrisulfonic acid, 8-amino-, di-sodium salt	6
4023	Naphthionic acid, sodium salt	14
2919	Sulfanilic acid, N,N-dimethyl-	62
	Thiocarbamates	
3643	Carbamic acid, (2-aminoethyl)dithio-	77
4031	-----, dimethyldithio, m-toluidinomethyl ester	100
3058	Cyclohexyl carbamic acid, N-2-(cyclohexylamino)-ethyldi : o-	57

TABLE I

Code No.	Classification and Name	K Value
AMINES		
Monosubstituted		
Thioureas		
5520	Pseudourea, 2-(2-aminoethyl)-2-thio-, dihydro-bromide	92
7215	-----, 2-[ (diethylamino)ethyl]-2-thio-, dihydro-chloride	88
5704*	-----, 2-[2-(dimethylamino)ethyl]-2-thio-, di-hydrochloride	98
Ureas		
5794	Hydantoin, 1-amino-, monohydrochloride	87
6397	2-Imidazolidinone, 1-(2-aminoethyl)-	86
2911	Uracil, 6-amino-	28
2912	-----, 5,6-diamino-, salt with 1/2 f. wt. sulfuric acid	27
4942	Urea, cyclohexylaminomethyl-	84
Miscellaneous		
7067	Anthraquinone, 1-amino-	40
3703	Benzaldehyde, p-(dimethylamino)-, thiosemicarbazone	25
4249	Ethanol, 2,2'-iminodi-, diester with potassium hydrogen sulfate, hydrate	-135
Iodonium compounds.		
3432	bis(aminophenyl)----- iodide	52
5680*	Thiocyanic acid, p-(dimethylamino)phenyl ester, salt with 1 f. wt. toluenesulfonic acid	99
Disubstituted		
Alcohol-Ethers		
6622	1-Naphthalenemethanol, $\alpha$ -(2-dibutylamino-1,1-di-methylethyl)-4-methoxy-, hydrochloride	94
6538	-----, $\alpha$ -(dibutylaminomethyl)-2-methoxy-, hydrochloride	92
6658	-----, $\alpha$ -(dipentylaminomethyl)-2-methoxy-, hydrochloride	96
6536	9-Phenanthrenemethanol, $\alpha$ -(N-butyl-p-methoxy-anilinomethyl)-1,2,3,4-tetrahydro-, hydrochloride	85
Alcohol-Halides		
5111	Aniline, o-chloro-N,N-bis(2-hydroxypropyl)-	83
6559	Benzyl alcohol, o-chloro- $\alpha$ -(dioctylaminomethyl)-	91
6672	Ethanol, 2-(p-bromobenzylamino)-, hydrochloride	73
5105	-----, 2-(m-chloroanilino)-	81
5103	-----, 2-(o-chloroanilino)-	82

TABLE I

Code No.	Classification and Name	K Value
AMINES		
Disubstituted		
Alcohol-Halides		
5333	Ethanol, 2,2'-( <u>m</u> -chloroanilino)bis-	65
5120	-----, 2-(2,5-dichloroanilino)-	77
6676	1-Naphthalenemethanol, 4-bromo- $\alpha$ -(dodecylamino-methyl)-	42
6669	-----, 4-chloro- $\alpha$ -(2-diethylaminoethyl)-, hydrochloride, hydrate	100
6640	-----, 2-chloro- $\alpha$ -(dihexylaminomethyl)-, hydrochloride	93
6670	-----, 2-chloro- $\alpha$ -(dipentylaminomethyl)-, hydrochloride	96
4813	2-Propanol, 1,1'- <u>o</u> -chloroanilinobis-	94
5334	-----, 1-chloro-3-( <u>N</u> -ethyl- <u>m</u> -toluidino)-	80
Alcohol-Phenols		
6662	Ethanol, 2-(5- <i>tert</i> -butyl-2-hydroxybenzylamino)-	98
6655	-----, 2,2'-(5- <i>tert</i> -butyl-2-hydroxybenzyl-amino)bis-	98
6702	-----, 2,2'-(5- <i>tert</i> -butyl-2-hydroxy-3-phenylbenzylamino)bis-	99
6654	-----, 2-[5-(1,1-dimethylpropyl)-2-hydroxybenzyl-amino]-	97
6018	-----, 2,2'-( <u>p</u> -hydroxyanilino)bis-	44
5330	-----, 2-( <u>o</u> -hydroxybenzylamino)-	34
6649	-----, 2-(2-hydroxy-3-phenylbenzylamino)-	83
Amide-Ethers		
4940	Acetamide, 2-(6-methoxy- <u>m</u> -toluidino)-	74
4838*	<u>p</u> -Acetanisidine, 2'-amino-	27
Amide-Halides		
4939	Acetamide, 2-( <u>m</u> -bromoanilino)-	95
4941	-----, 2-( <u>m</u> -chloroanilino)-	66
Amide-Heterocyclic Compounds		
2710	Phenothiazine, 10-benzoyl-3,7-bis(dimethylamino)-	-6
5701	<u>s</u> -Triazine, 4-[(2-acetamidoethyl)amino]-2,6-diamino-	43
5699	2- <u>s</u> -Triazineacetamide, 4,6-diamino-	42
Ether-Halides		
4562	Aniline, 3-chloro-4-( <u>p</u> -chlorophenoxy)-, hydrochloride	96
4681	Triethylamine, 2-pentachlorophenoxy-	96

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Code No.	Classification and Name	K Value
AMINES		
Disubstituted		
Ether-Heterocyclic Compounds		
6230	Doxylamine, succinate	91
6225	Lepidine, 8-[2-(diethylamino)ethyl]amino]-6-methoxy-, dihydrochloride	95
6226	-----, 6-methoxy-8-[1-methyl-4-(propylamino)-butyl]amino], dihydrochloride	87
6280	Quinoline, 8-[(3-aminopropyl)amino]-6-methoxy-, dihydrochloride	90
3995	-----, 8-amino-6-methoxy-, monohydrochloride	81
6387	-----, 8-[6-[(4-benzylpiperazin-1-yl)hexyl]-amino]-6-methoxy-, dioxalate	93
6283	-----, 8-[[6-(diallylamino)hexyl]amino]-6-methoxy-	96
6285	-----, 8-[[5-(isopropylamino)pentyl]amino]-6-methoxy-3,4-dimethyl-, dihydrobromide	27
6282	-----, 6-methoxy-8-[5-[(1-methylbutyl)amino]-pentyl]amino], monohydrochloride	95
5616	s-Triazine, 2,6-diamino-4-[1-(butoxy)ethyl]methyl-	60
5601*	-----, 2,6-diamino-4-[1-[1-(ethoxy)ethoxy]cyclohexyl]-	93
Ether-Imides		
5261	Phthalimide, N-[(p-ethoxyanilino)methyl]-	-7
5268	-----, N-[(p-methoxyanilino)methyl]-	71
Ether-Nitriles		
4362	Acetonitrile, 2-(o-anisidino)-	100
5087	Propionitrile, 3-(o-anisidino)-	93
5088	-----, 3-(p-phenetidino)-	83
Ether-Nitro Compounds		
3885	p-Anisidine, 2,6-dinitro-	74
4369	o-Anisidine, N-(2,4-dinitrophenyl)-	72
4669	Dibenzylamine, N-[2-(2,4-dinitrophenoxy)ethyl]-	84
5279	p-Phenetidine, 2-nitro-	81
Halide-Heterocyclic Compounds		
3472	Pyrimidine, 2-amino-4-chloro-6-methyl-	64
6633	Quinoline, 7-bromo-4-[4-(diethylamino)-1-methyl-butyl]amino], diphosphate	27
5609	s-Triazine, 2,4-bis[(1,1,3,3-tetramethylbutyl)amino]-6-chloro-	-2
5612	-----, 2,6-di(tert-butylamino)-4-chloro-	99
5611	-----, 4-chloro-2,6-di(isopropylamino)-	93
4925	-----, 4,6-diamino-2-chloro-	75

TABLE I

Code No.	Classification and Name	K Value
AMINES		
Disubstituted		
Halide-Heterocyclic Compounds		
5614	-Triazine, 2,4-diamino-6-chloro-	95
4794	-----, 2,4-dichloro-6-( <u>o</u> -chloroanilino)-	80
5613	-----, 2,6-dichloro-4-(cyclohexylamino)-	76
Halide-Imides		
5261	Phthalimide, N-[( <u>m</u> -bromoanilino)methyl]-	38
6211	-----, 3,4,5,6-tetrachloro-N-[2-(diethylamino)ethyl]-	43
5254	-----, N-[( <u>p</u> -iodoanilino)methyl]-	37
Halide-Ketones		
6677	Acetophenone, 2-[benzyl[ ( <u>p</u> -diethylamino)benzyl]-amino]-3',4'-dichloro-, dihydrochloride	61
6556	-----, 4'-bromo-2'-(N-methylanilino)-	32
6710	Ketone, 9(or 10)-bromo-3-phenanthryl (diethylamino)methyl	68
6641	Propiophenone, 3-(benzylmethylamino)-4'-chloro-, hydrochloride	88
Halide-Nitriles		
5091	Propionitrile, 3-( <u>m</u> -chloroanilino)-	71
5092	-----, 3-( <u>c</u> -chloroanilino)-	83
Halide-Nitro Compounds		
4139	Aniline, 2-chloro-4-nitro-	86
4140	-----, 4-chloro-2-nitro-	88
3449	<u>m</u> -Toluidine, 2,6-diiodo-4-nitro-	60
Halide-Quaternary Nitrogen Compounds		
Ammonium compounds.		
4743	[4-[ ( <u>o</u> -chlorophenyl)[ <u>p</u> -(dimethylamino)phenyl]methylene]-2,5-cyclohexadienyldene]dimethyl----- chloride	98
Pseudoindolium compounds.		
4744	2-[4-[(2-chloroethyl)ethylamino]-2-methylstyryl]-1,3,3-trimethyl-3H----- chloride	99
4742	2-[ <u>p</u> -[(2-chloroethyl)methylamino]styryl]-1,3,3-trimethyl-3H----- chloride	87
Halide-Sulfones		
6636	Aniline, 3-chloro-4,4'-sulfonyldi-	81
2920	<u>m</u> -Toluidine, 6-ethylsulfonyl-, $\alpha,\alpha,\alpha$ -trifluoro-	71

TABLE I

Code No.	Classification and Name	K Value
AMINES		
Disubstituted		
Heterocyclic-Ketones		
5615	2-Pentanone, 4-(4,6-diamino-s-triazin-2-yl)-4-methyl-	68
4329	4-Penten-2-one, 3,3-bis[2-(4,6-diamino-s-triazin-2-yl)ethyl]-4-methyl-	40
6476	Propiophenone, 2-(benzylmethylamino)-3-morpholino-3-phenyl-	58
Heterocyclic-Nitriles		
5429	s-Triazine, 2,2'-(3-cyano-3-phenylpentamethylene)-bis[4,6-diamino-	10
5606	-----, 2,6-diamino-4-[ (1-cyanocyclohexyl)methylamino]-	59
5608	-----, 2,6-diamino-4-[ [N-(cyanomethyl)-1,1,3,3-tetramethylbutyl]amino]-	21
5700	-----, 2,6-diamino-4-(o-cyanophenyl)-	87
5604	-----, 2,6-diamino-4-[ (1-cyanopropyl)methylamino]-	-1
Ketone-Phenols		
6308	Acetophenone, 3',4'-dihydroxy-2-[ (3-phenylpropyl)amino]-, hydrochloride	63
6087	3-Buten-2-one, 4-(p-hydroxy-N-methylanilino)-	37
Nitrile-Phenols		
4724	Propionitrile, 3,3'-(2-hydroxynaphth-1-ylmethyl)imino]bis-	58
4481	-----, 3,3'-(5-phenylsalicylimino)bis-	74
Miscellaneous		
2890	Acetoacetic acid, $\alpha$ -[bis[p-(dimethylamino)phenyl]-methyl]-, ethyl ester	32
4360	Acetophenone, 2-[p-(dimethylamino)phenylimino]-2-phenyl-	74
5343	Acrylic acid, 3-(m-chloroanilino)-2-(ethyoxy carbonyl)-, ethyl ester	46
2921	o-Anisidine, 5-(ethylsulfonyl)-	32
3132	Anthranilic acid, 3,5-dichloro-	56
6623	Benzoic acid, p-amidino-, ethyl ester, hydrochloride	79
6699	-----, 3,5-bis[(dimethylamino)methyl]-4-hydroxy-, methyl ester	60
5878	-----, p-[bis(2-hydroxyethyl)amino]-, ethyl ester	43
6477	2H-1-Benzopyran-3-carboxylic acid, 8-allyl-2-oxo-, 2-(dibenzylamino)ethyl ester, hydrochloride	58

TABLE I

Code No.	Classification and Name	K Value
AMINES		
Disubstituted		
	Miscellaneous	
6697	p-Benzoquinone, 2,5-bis(2-pyridylamino)-	21
6233	Benzothiazole, 6-amino-2-mercaptop-	92
3219	Carbamic acid, N-(2-cyanoethyl)-N-2-[(2-cyanoethyl)amino]ethyl]dithio-	63
6673	o-Cresol, 6-bromo-4-tert-butyl- $\alpha$ -(dimethylamino)-	96
7055	Disulfide, bis(2-amino-5-sulfamoylphenyl)	69
5695	Ethanol, 2-(2,6-diamino-s-triazin-4-ylthio)-	46
4895	-----, 2-(2,4-dinitroanilino)-	84
3972	D-Glucoside, 1-[bis(2-hydroxyethyl)amino]-	-27
5647	Imidazole, 4,5-dihydro-1-(2-aminoethyl)-2-[(3,4-dichlorobenzyl)thio]-, dihydrochloride	88
5327	Maleimide, N-m-[bis(2-hydroxyethyl)amino]phenyl-	-3
5510	1,4-Naphthoquinone imine, 2-amino-, monohydrochloride	100
6063	2-Phenazinol, 8-amino-7-methyl-	20
4889	Phenol, p-(2,4-dinitroanilino)-	9
5269	Phthalimide, N-[p-(methylcarbamoyl)anilinomethyl]-	74
5619	2-Piperazinone, 4-(1,6-diamino-s-triazin-2-yl)-3,3-dimethyl-	94
4927	Propionitrile, 3-[N'-(2-hydroxyethyl)anilino]-, sulfate	56
4719	Pseudoindolium compounds. 2-[2-(2,4-dimethoxyanilino)vinyl]-1,3,3-trimethyl-3H-----chloride	66
4740	1,3,3-trimethyl-2-[2-[[2-methylbenzothiazol-5(or 6)-yl]-amino]vinyl]-3H-----chloride	90
6291	Pyridine, 5-amino-2-sulfanilyl-	77
5312, 5803	-----, 2-(furylaminio)-	86, 99
5534	$\gamma$ -Resocyclic acid, 4-amino-, hydrogensulfate	64
5669	Thiocyanic acid, 3-chloro-4-(dimethylamino)phenyl ester	100
5935	s-Triazine, 2-amino-4-benzenesulfonamido-6-phenyl-----,	15
4721	-----, 2,4-diamino-6-(2-furyl)-	98
4339	-----, 2,4-diamino-6-(methylthio)-	100
5761	-----, 2,4-diamino-6-(3-sulfopropyl)-, sodium salt	45
4490	-----, 2,2'-[oxybis(ethylenethio)]bis[4,6-diamino-	25
Polysubstituted		
5117	Acetic acid, [(2-amino-5-ethoxyphenyl)thio]-	81
6642	Acetophenone, 2-(benzylmethylamino)-3'-chloro-4'-ethoxy-, hydrochloride	87
2995	-----, 4'-[2,2,2-trichloro-1-hydroxyethyl)amino]-	71
6646	Acridine, 6-chloro-9-[[4-(diethylamino)-1-(4-pyridyl)-butyl]amino]-2-methoxy-, trihydrochloride, monohydrate	98

TABLE I

Code No.	Classification and Name	K Value
AMINES		
Polysubstituted		
6555	Acridine, 6-chloro-9-[ $\beta$ -[2-(diethylamino)ethyl]-phenethylamino]-2-methoxy-, dihydrochloride	95
6644	-----, 6-chloro-9-[ $\alpha$ -[3-(diethylamino)propyl]phenethylamino]-2-methoxy-, dihydrochloride, trihydrate	98
6560	-----, 6-chloro-9-[ $\beta$ -[2-(dimethylamino)ethyl]phenethylamino]-2-methoxy-, dihydrochloride	88
Ammonium compounds.		
5545	hexadecyl[2-[ (p-methoxybenzyl)-2-pyrimidinyl-amino]ethyl]dimethyl----- bromide	82
4935	$\alpha$ -Anisidineethanol, $\alpha$ -chloromethyl-	67
7224	Anthranilic acid, 4-chloro-N-(p-methoxyphenyl)-	69
6558	Benzyl alcohol, $\alpha$ -(benzylethylaminomethyl)-3-chloro-4-ethoxy-, hydrochloride	92
6557	-----, $\alpha$ -(benzylmethylenaminomethyl)-3-chloro-4-ethoxy-, hydrochloride	66
5432	$\alpha$ -Cresol, 6,6'-thiobis[4-chloro- $\alpha$ -(dimethylamino)-	97
3675	Crotonic acid, $\alpha$ -anilino- $\beta$ -chloro- $\gamma$ -hydroxy- $\gamma$ -methoxy-, $\gamma$ -lactone	34
4752	Ethanol, 1-(4-amino-6-phenyl-s-triazin-2-ylamino)-2,2,2-trichloro- and s-Triazine, 2,4-bis(2,2,2-trichloro-1-hydroxyethylamino)-6-phenyl-----	25
6674	-----, 2-(3-bromo-5-tert-butyl-2-hydroxybenzylamino)-	98
6675	-----, 2-(5-tert-butyl-3-chloro-2-hydroxybenzylamino)-	100
6094	-----, 2-[N-(3-chlorallyl)-5-chloro-3-methoxyanilino]-	80
6316	-----, 2-[ $\beta$ -(7-chloro-4-quinolylamino)pentyl]ethyl-amino]-, monosulfate	99
5801	DL-2-Furanserine	48
3654	Melamine, $N^2,N^4,N^6$ -tris(2-benzothiazolylthiomethyl)-	3
4120	2,7-Naphthalenedisulfonic acid, 3-(p-aminophenylazo)-4,5-dihydroxy-, disodium salt	23
6638	Nicotinanilide, 4'-sulfanilyl-	64
5620	Piperazone, 4-[4,6-bis(chloroamino)-s-triazin-2-yl]-1-chloro-3,3-dimethyl-	92
6667	2-Propanol, 1-(7-chloro-4-quinolylamino)-3-diethyl-amino-, diphosphate	97
6309	Protocatechuyl alcohol, $\alpha$ -[1-(p-methoxyphenyl)-2-propylaminomethyl]-, hydrochloride	89
3133, 7221	4-Pyrimidinol, 2,6-diamino-5-nitroso-	-9, -48
6067	Quinocrine, salt with 1 f. wt. sulfamic acid	82
6319	4-Quinolinemethanol, 7-chloro-2-(p-chlorophenyl)- $\alpha$ -(diethylaminomethyl)-, hydrochloride	94
6320	-----, 3-(p-chlorophenyl)- $\alpha$ -(diethylaminomethyl)-6-methoxy-	75

TABLE I

Code No.	Classification and Name	K Value
AMINES		
Polysubstituted		
6540	4-Quinolinemethanol, $\alpha$ -(3-dibutylaminopropyl)-6-methoxy-, hydrochloride	93
	Quinolinium compounds.	
6069	4-chloro-2-[ $p$ -(dimethylamino)phenyliminomethyl]-6-methoxy-1-methyl----- chloride	89
6472	Salicylic acid, 5-bromo-3-phenyl-, 2-(diisopropylamino)ethyl ester, hydrochloride	71
6487	-----, 5-iodo-3-phenyl, 2-(isopropylamino)ethyl ester, hydrochloride	65
2803	Spiro[pseudoisoindole-1,9'-xanthen]-3(2H)-one, 3',6'-bis(diethylamino)-	-4
6068	Sulfanil-p-anisidide, $N^4$ -(1-sulfoethyl)-2'-(1-sulfoethylamino)-, disodium salt, tetrahydrate	24
7106	4H-1,2,4-Triazole, 4-amino-3-hydrazino-5-mercaptop-	96
AMINE OXIDES		
5512	Trimethylamine, $N$ -oxide, dihydrate	42
ANTIMONY COMPOUNDS		
6961	Stibine, triphenyl-	42
6962	dichloride	36
3374	-----, tri- $p$ -tolyl-	-23
ARSENIC COMPOUNDS		
3373	Arsine, tri- $p$ -tolyl-	-22
3016	Benzeneearsonic acid, $p$ -(4-biphenylylsulfamoyl)-	100
3013	-----, $p$ -morpholinylsulfonyl-	81
3014	-----, $p$ -(1-piperidylsulfonyl)-	56
3011	-----, $p$ -sulfamoyl-	77
3015	Benzesulfonanilide, 4-arsenosono-	45
3377	1-Butaneearsonic acid, 3-methyl-	90
4008	Ethane, thioarsenosono-	100
3012	Morpholine, 4-( $p$ -arsenosophenylsulfonyl)-	60
6621	Phenol, 2-amino-4-arsenosono-, hydrochloride	95
3376	2-Propene-1-arsonic acid	82
3339	$\alpha$ -Tolueneearsonic acid	98
4418	Xanthic acid, <u>tert</u> -butyl-, arsenic(III) salt	97

TABLE I

Code No.	Classification and Name	K Value
AZO AND AZOXY COMPOUNDS		
5050	Acetanilide, 4'-phenylazo-	72
5051	<u>o</u> -Acetotoluuidide, 4'-( <u>m</u> -tolylazo)-	70
6028	Aniline, 1,3'-azoxydi-	-52
4442	Benzanilide, 4-chloro-4'-phenylazo-	25
4689	-----, 2,4-dichloro-4'-phenylazo-	16
4120	2,7-Naphthalenedisulfonic acid, 3-( <u>p</u> -amino-phenylazo)-4,5-dihydroxy-, disodium salt	23
4000	Phenol, <u>p</u> -phenylazo-	96
5187	Pinonic acid, azine	<u>96</u>
4751*	2-Pyrazoline-3-carboxylic acid, 5-oxo-1-( <u>o</u> -sulfophenyl)-4-( <u>o</u> -sulfophenylazo)-, salt with 2 f. wt. dicyclohexylamine	100
4411	<u>o</u> -Tolidine, 4-( <u>o</u> -tolylazo)-	<u>91</u>
BISMUTH COMPOUNDS		
3620	Benzoic acid, <u>o</u> -chloro-, bismuth(III) salt	-44
3120	Bismuthine, triphenyl-, triiodonium chloride	83
5948	Carbamic acid, ethylenebis[dithio-, bismuth(III) salt	65
BORON COMPOUNDS		
3589	Abietylamine, compound with 1/3 f. wt. boron trifluoride	65
3587	Allylamine, compound with 1 f. wt. boron trifluoride	95
3146	Aniline, compound with 1 f. wt. boron trifluoride	44
3333	Benzeneboronic acid	28
6474	Boric acid, cyclic ester with 2,2-dimethyl-1,3-propanediol, diester with 2,2-dimethyl-1,3-propanediol trisopropyl ester	21
6989	-----, triphenylmercuri(II) derivative	-23
6990	Diethylamine, compound with 1 f. wt. boron trifluoride	25
4496	Dimethylamine, compound with diborane	97
3144	Dodecylamine, <u>N,N</u> -bis(2-hydroxyethyl)-, compound with 1 f. wt. boron trifluoride	45
7256	-----	92
3158	-----	
3159	compound with 1/2 f. wt. boron trifluoride	73
3160	compound with 1/3 f. wt. boron trifluoride	93
3147	-----, compound with 1 f. wt. boron trifluoride	82
3148	compound with 1/2 f. wt. boron trifluoride	67
3149	compound with 1/3 f. wt. boron trifluoride	90
3150	Hexadecylamine, compound with 1 f. wt. boron trifluoride	96
3151	compound with 1/2 f. wt. boron trifluoride	67
3152	compound with 1/3 f. wt. boron trifluoride	97
3379	1-Naphthaleneboronic acid	<u>96</u>

TABLE I

Code No.	Classification and Name	K Value
BORON COMPOUNDS		
3156	Octadecylamine, compound with 1 f. wt. boron trifluoride	92
3157	compound with 1/2 f. wt. boron trifluoride	91
3164	Octylamine, <u>N,N</u> -bis(2-hydroxyethyl)-, compound with 1/3 f. wt. boron trifluoride	73
3145	-----, compound with 1 f. wt. boron trifluoride	76
3588	Propylamine, compound with 1 f. wt. boron trifluoride	55
7257	Pyridine, compound with diborane	100
3161	Tetradecylamine, <u>N,N</u> -bis(2-hydroxyethyl)-, compound with 1 f. wt. boron trifluoride	99
3162	compound with 1/2 f. wt. boron trifluoride	88
3163	compound with 1/3 f. wt. boron trifluoride	92
5153	-----, compound with 1/4 f. wt. boron trichloride	100
3153	compound with 1 f. wt. boron trifluoride	41
3154	compound with 1/2 f. wt. boron trifluoride	94
3155	compound with 1/3 f. wt. boron trifluoride	93
7255	Trimethylamine, compound with diborane	2
3331	Tripentylamine, compound with 1 f. wt. boron trifluoride	95
3330	Urea, compound with 1/4 f. wt. boron trifluoride	5
CARBAMATES		
Unsubstituted		
4117	m-Benzenedicarbamic acid, diisopropyl ester	70
5443	dimethyl ester	49
6691	2-Benzoxazolinone	56
5537	Bicarbamic acid, dimethyl ester	74
4330	4,4'-Bicarbanilic acid, diisopropyl ester	65
4332	-----, 3,3'-dimethyl-, diisopropyl ester	68
5544	2-Butyne-1,4-diol, dicarbanilate	38
6032	3-Butyn-2-ol, carbanilate	79
5182	-----, 2-methyl-, carbanilate	84
3354	Carbamic acid, isopropyl ester	63
2915	methylallyl ester	78
3352	-----, benzyl-, ethyl ester	68
4892	-----, diphenyl-, ethyl ester	82
5480	-----, dipropyl-, phenyl ester	77
5475	-----, methyl-, phenyl ester	58
5924	-----, (1,1,3,3-tetramethylbutyl)-, isopropyl ester	15
3908	Carbanilic acid, allyl ester	83
3301	benzyl ester	63
3302	butyl ester	60
5466, 5759	crotyl ester	46, 69
5912	cyclopentyl ester	69
3303	dodecyl ester	23

TABLE I

Code No.	Classification and Name	K Value
CARBAMATES		
Unsubstituted		
3999	Carbanilic acid, ethyl ester	96
5469	2-ethylhexyl ester	91
3626	isopropyl ester	75
3679	methyl ester	28
5016	2-methylallyl ester	72
5185	phenethyl ester	34
5478	phenyl ester	72
3680	propyl ester	84
6092	2-propynyl ester	68
5244	----, N-allyl-, isopropyl ester	97
5245	----, N-2-butenyl-, isopropyl ester	97
4672	----, 2,3-dimethyl-, isopropyl ester	79
4673	----, 2,4-dimethyl-, isopropyl ester	95
4674	----, 2,5-dimethyl-, isopropyl ester	79
4675	----, 2,6-dimethyl-, isopropyl ester	98
4676	----, 3,5-dimethyl-, isopropyl ester	79
4367	----, m-methyl-, isopropyl ester	94
6033	2-propynyl ester	92
3686	----, p-methyl-, allyl ester	94
5238	----, o-phenyl-, ethyl ester	83
5242	----, N-vinyl-, isopropyl ester	94
5539	Cyclohexanol, dl-cis-3,3,5-trimethyl-, carbanilate	97
5540	----, dl-trans-3,3,5-trimethyl-, carbanilate	97
4370	2-p-Cymenecarbamic acid, isopropyl ester	89
3854	Ethylene glycol, dicarbanilate	12
5925	Geraniol, carbanilate	74
5541	4-Heptanol, 2,6-dimethyl-, carbanilate	76
5915	----, 4-ethynyl-2,6-dimethyl-, carbanilate	72
5189	3-Hexyne-2,5-diol, 2,5-dimethyl-, dicarbanilate	50
5914	Linalool, carbanilate	87
5913	Methylparafynol, carbanilate	88
3300	1-Naphthalenecarbamic acid, allyl ester	64
5341	Neopentyl glycol, dicarbanilate	40
6809	2-Oxazolidinone, 5-methyl-	58
6810	----, 5-phenyl-	48
5246	1,4-Piperazinedicarboxylic acid, 2,5-dimethyl-, diisopropyl ester	97
5243	1-Piperidinecarboxylic acid, 5-ethyl-2-methyl-, isopropyl ester	97
5240	----, isopropyl ester	81
5023	2-Propyn-1-ol, carbanilate	88
4896	1-Pyrrolidinecarboxylic acid, isopropyl ester	84
6034	$\alpha$ -Terpineol, carbanilate	43

TABLE I

Code No.	Classification and Name	K Value
CARBAMATES		
Monosubstituted		
Alcohols		
6811	Carbamic acid, 2-hydroxyethyl ester	-57
5017	2-hydroxypropyl ester	-3
6814	-----, benzyl-, 2-hydroxyethyl ester	58
5019	-----, bis(2-hydroxyethyl)-, 2-hydroxyethyl ester	39
5027, 6808	-----, dodecyl-, 2-hydroxyethyl ester	59, 64
5021	-----, ethylene-di-, bis(2-hydroxyethyl) ester	7
5188	-----, hexadecyl-, 1(or 2)-monoester with 1,2-propanediol	74
5755	-----, (3-hydroxy-2,2-dimethylpropyl)-, ethyl ester	45
5018	-----, 2-hydroxyethyl-, 2-hydroxyethyl ester	22
6802	2-hydroxypropyl ester	-17
5022	-----, isopentyl-, 2-hydroxyethyl ester	56
5030	-----, octadecyl-, 2-hydroxyethyl ester	50
Amines		
5461	Carbanilic acid, 2-amino-, isopropyl ester	76
5468	-----, 2-(diethylamino)ethyl ester	93
6251	-----, 1-(dimethylamino)prop-2-yl ester	59
Esters		
6300	Ethylene glycol, monoacetate, monocarbanilate	61
5184	Hydracrylic acid, carbanilate, butyl ester	73
4900	Lactic acid, carbanilate, benzyl ester	55
5183	-----, 2-methyl-, carbanilate, ethyl ester	71
5916	Mandelic acid, carbanilate, butyl ester	45
Ethers		
4679	4,4'-Bicarbanilic acid, 3,3'-dimethoxy-, diisopropyl ester	48
4371	Carbanilic acid, 2,5-diethoxy-, isopropyl ester	61
4875	-----, 2,4-dimethoxy-, isopropyl ester	69
4368	-----, m-ethoxy-, isopropyl ester	65
4671	-----, m-methoxy-, isopropyl ester	79
5286	2-Propanol, 1-phenox-, carbanilate	48
Halides		
5290	Allyl alcohol, 1-(chloromethyl)-, m-chlorocarbanilate	93
5257	4,4'-Bicarbanilic acid, 3,3'-dichloro-, diisopropyl ester	-15
5917	2-Butanol, 3-methyl-, m-chlorocarbanilate	74
5292	-----, 1,3,4-trichloro-, carbanilate	69
5467	2-Butenol, 3-chloro-, carbanilate	59

TABLE I

Code No.	Classification and Name	K Value
CARBAMATES		
Monosubstituted		
Halides		
4493	Carbamic acid, 2-chloroethyl ester	92
6258	2-fluoroethyl ester	(T)
5479	----, dimethyl-, p-chlorophenyl ester	95
5476	----, ethyl-, p-chlorophenyl ester	61
3681	Carbanilic acid, 2-chloroethyl ester	84
5764	2,4-dichlorophenyl ester	58
3858, 6257	2-fluoroethyl ester	(T), 87
5459	----, m-chloro-, allyl ester	91
6259	sec-butyl ester	86
6264	tert-butyl ester	47
5562	2-chloroallyl ester	86
5288	3-chloroallyl ester	93
4879	2-chloroethyl ester	64
6265	2-cyclopenten-1-yl ester	32
5932	1,1-dimethylpropyl ester	86
6261	2-fluoroethyl ester	99
5559	$\alpha$ -methylbenzyl ester	52
5933	1-methylbutyl ester	86
5934	2-methylbutyl ester	54
3364	propyl ester	69
5553	2-propynyl ester	92
3367	----, o-chloro-, ethyl ester	65
5462	isopropyl ester	93
3365	----, p-chloro-, isopropyl ester	72
6321	2-propynyl ester	78
4916	----, 5-chloro-2-methyl-, 2-chloroethyl ester	76
4340	isopropyl ester	81
5464	----, m-chloro-N-methyl-, isopropyl ester	90
4375	----, 3-chloro-2-methyl-, isopropyl ester	50
4376	----, 3-chloro-4-methyl-, isopropyl ester	70
4913	----, 2,5-dichloro-, 2-chloroethyl ester	54
3363	isopropyl ester	73
5930	2-propynyl ester	87
4687	----, 2,3-dichloro-, isopropyl ester	82
4373	----, 2,4-dichloro-, isopropyl ester	74
5156	----, 3,5-dichloro-, isopropyl ester	85
4688	----, 3,5-dichloro-2-methyl-, isopropyl ester	77
4917	----, m-methyl-, 2-chloroethyl ester	87
5482	----, m-(trifluoromethyl)-, isopropyl ester	63
5560	Cyclohexanol, 1-ethyryl-, m-chlorocarbanilate	41
4121	Ethylene glycol, bis(m-chlorocarbanilate)	6
5296	Indan, 4-hydroxy-, m-chlorocarboanilate	83
5297	----, 5-hydroxy-, m-chlorocarbanilate	7

TABLE I

Code No.	Classification and Name	K Value
CARBAMATES		
Monosubstituted		
	Halides	
5465	2-Propanol, 1-chloro-, <u>m</u> -chlorocarbanilate	47
5460	<u>m</u> -methylcarbanilate	75
5037	-----, 1,3-dichloro-, <u>m</u> -chlorocarbanilate	74
5291	-----, 3,3,3-trichloro-2-methyl-, carbanilate	22
	Heterocyclic Compounds	
4873	Carbamic acid, furfuryl-, isopropyl ester	85
3673, 5181	Furfuryl alcohol, carbanilate	59, <u>92</u>
5805	2-Imidazoline-1-ethanol, 2-(x-heptadecenyl)-, carbanilate	81
5014	4-Morpholineethanol, carbanilate	86
5020	4-Morpholinecarooxylic acid, isopropyl ester	89
5538	Pyran-2-methanol, tetrahydro-, carbanilate	75
5176	2-Pyridinecarbamic acid, 3-methyl-, isopropyl ester	89
5177	-----, 4-methyl-, isopropyl ester	70
5178	-----, 5-methyl-, isopropyl ester	73
5179	-----, 6-methyl-, isopropyl ester	81
4899	-----, 4,6-dimethyl-, isopropyl ester	92
5284	2-Pyridineethanol, carbanilate	56
5911	3-Pyridinol, carbanilate	80
5535	8-Quinolinol, carbanilate	65
5174	1 <i>H</i> -Tetrazole-5-carbamic acid, ethyl ester	85
4137	2-Thiazolecarbamic acid, 4,5-bis(chloromercuri)-, benzyl ester	68
4136	-----, ethyl ester	81
	Nitriles	
4366	Carbanilic acid, <u>m</u> -cyano-, isopropyl ester	87
4874	-----, 1-cyanoethyl ester	64
5024	Hydracrylonitrile, carbanilate	67
5026	Lactonitrile, 2-methyl-, carbanilate	67
	Nitro Compounds	
5877	2-Benzoxazolinone, 5,6-dinitro-	88
5477	Carbamic acid, ethyl-, <i>p</i> -nitrophenyl ester	87
3939	-----, methyl ester, 3,3-dinitro-1,5-pentamethylenebis-	47
4670	Carbanilic acid, <u>m</u> -nitro-, isopropyl ester	94
5463	-----, <i>p</i> -nitro-, isopropyl ester	53
3304, 5013	Propanol, 2-methyl-2-nitro-, carbanilate	73, <u>25</u>

TABLE I

Code No.	Classification and Name	K Value
CARBAMATES		
Monosubstituted		
Miscellaneous		
3353	Carbanilic acid, <i>p</i> -hydroxy-, isopropyl ester	67
3688	-----, 2-mercaptoproethyl ester	80
3411	2,4-Oxazolidinedione, 5,5-dimethyl-	61
Disubstituted		
Alcohol-Halides		
4749	Carbamic acid, 2,2,3-trichloro-1-hydroxybutyl-, butyl ester	92
5474	-----, 2,2,2-trichloro-1-hydroxyethyl-, isopropyl ester	25
Ester-Halides		
6044	Carbanilic acid, 5-chloro-2-methyl-, 2-propynyl ester	80
4918	Lactic acid, carbanilate, 2-chloroethyl ester	79
5294	-----, <i>m</i> -chlorocarbanilate, 2-chloroethyl ester	93
5298	cyclohexyl ester	77
Ether-Halides		
4880	Carbanilic acid, 5-chloro-2-methoxy-, isopropyl ester	83
5255	-----, 2-methoxy-5-methyl-, 2-chloroethyl ester	95
4920	Ethanol, 2-(2,4-dichlorophenoxy)-, carbanilate	67
5256	<i>m</i> -chlorocarbanilate	73
6323	2-Propanol, 1-chloro-3-isopropoxy-, carbanilate	78
Halide-Nitriles		
4915	Carbanilic acid, <i>m</i> -cyano-, 2-chloroethyl ester	83
6263	Hydracrylonitrile, <i>m</i> -chlorocarbanilate	52
Phe mol-Quinones		
5324	1-Anthraquinonecarbamic acid, 4-hydroxy-, methyl ester	-42
5344	pentyl ester	0
Miscellaneous		
3631	2(5H)-Furanone, 3,4-dichloro-5-hydroxy-, carbanilate	44
5186	Lactic acid, <i>m</i> -cyanocarbanilate, butyl ester	82
5247	-----, 2-methoxy-5-methylcarbanilate, butyl ester	87
6043	2-Propanol, 1,1,1-trichloro-3-nitro-, carbanilate	88
5195	2-Pyridinecarbamic acid, 5-chloro-, isopropyl ester	55
5918	Urea, 1,1-bis(2-hydroxyethyl)-3-( <i>m</i> -chlorophenyl)-, bis( <i>m</i> -chlorocarbanilate)	36

TABLE I

Code No.	Classification and Name	K Value
CARBAMATES		
Polysubstituted		
5936	Lactic acid, <u>m</u> -chlorocarbanilate, 2-(2,4-dichloro-phenoxy)ethyl ester	74
5997	-----, <u>m</u> -methylcarbanilate, 2-(2,4-dichlorophenoxy)ethyl ester	48
5293	Propionitrile, 3-(2-hydroxyethoxy)-, <u>m</u> -chlorocarbanilate	63
CARBOHYDRAZIDES		
5173	Carbohydrazide, 1-carbamoyl-	54
7036	-----, 1,5-diphenyl-	<u>100</u>
CARBONATES		
5180	Carbonic acid, allyl 4,6-dinitro- <u>o</u> -tolyl ester	98
6805*	-----, cyclic chloromethylene ester	<u>97</u>
6807	cyclic 1,2-dichloroethylene ester	77
3569	cyclic ethylene ester	-8
6799	cyclic methylvinylene ester	14
5008	-----, dioctadecyl ester	19
3344	-----, isopropyl 2,4-dichlorophenyl ester	33
3341	pentachlorophenyl ester	90
3342	x,x,x,x-tetrachlorophenyl ester	82
3343	2,4,5-trichlorophenyl ester	32
4713	-----, isopropyl ester, diester with pyrocatechol	76
4712	diester with resorcinol	60
3345, 5439	-----, methyl 2,4,5-trichlorophenyl ester	75, 84
4113	-----, 2,4,5-trichlorophenyl ester, diester with diethylene glycol	-42
COPPER COMPOUNDS		
3621	Benzoic acid, <u>o</u> -chloro-, copper(II) salt	43
4053	2-Benzimidazolethiol, copper(II) derivative	96
3326	2-Benzothiazolethiol, copper(II) derivative	<u>45</u>
3960	Carbamic acid, bis(2-hydroxyethyl)dithio-, copper(II) salt	90
3952	-----, diethyldithio-, copper(II) salt	50
2990	-----, dimethyldithio-, copper(II) salt	<u>100</u>
3216	-----, ethylenebis[N-(2- <u>o</u> -cyanoethyl)dithio-, copper(II) salt	29
3578	Cumic acid, copper(II) salt	85
3942	2,4-Hexanedione, copper(II) derivative	<u>86</u>

TABLE I

Code No.	Classification and Name	K Value
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## COPPER COMPOUNDS

3956	4-Morpholinecarbodithioic acid, copper(II) salt	-118
2771	Nicotine, compound with 1/2 f. wt. copper(II) benzoate, monohydrate	98
3001	compound with 1/2 f. wt. copper(II) <u>o</u> -benzoylbenzoate and 1 f. wt. o-benzoylbenzoic acid	94
2763	compound with 1/2 f. wt. copper(II) fumarate, pentahydrate	99
2762	compound with 1 f. wt. copper(II) phthalate and 1 f. wt. phthalic acid, hydrate	100
3004	compound with 1 f. wt. copper(II) thiocyanate	100
3007	compound with 1/2 f. wt. copper(II) thiocyanate and 1 f. wt. thiocyanic acid	100
2757	Oxalic acid, copper(II) hydrogen salt, salt with 1 f. wt. sodium oxalate, dihydrate	80
2758	diamminecopper(II) salt	90
6353	Phthalamic acid, N-isopropyl-, copper(II) salt	72
3627	Phthalic acid, copper(II) salt	73
2756	diamminecopper(II) salt	72
6389	-----, monobutyl ester, copper(II) salt	67
4509	Phenol, pentachloro-, diamminecopper(II) derivative	66
4510	rosinaminecopper(II) derivative	87
6776	8-Quinolinol, 5,7-dichloro-, copper(II) derivative	34
4465	Salicylamide, copper(II) derivative	96
3000	Succinic acid, diamminecopper(II) salt	80
4052	6H-1,3-Thiazine-2-thiol, 4,6,6-trimethyl-, copper(I) derivative	19
6391	<u>o</u> -Toluic acid, $\alpha$ -hydroxy- $\omega$ -sulfo-, $\gamma$ -lactone, copper(II) salt	60

## ESTERS, CARBOXYLIC ACIDS

## Unsubstituted

## Monobasic Acids

7210	Acetic acid, <u>o</u> -tolyl ester	46
5204	Benzoic acid, <u>l</u> -naphthyl ester	7
4815	1,4-Butanediol, dicrotonate	19
6486	Crotonic acid, isopropyl ester	3
5898	Cinnamic acid, methyl ester	29
5900	phenethyl ester	-36
6025	Isoborneol, acetate	47
2702	Lactic acid, acetate, <u>o</u> -tolyl ester	42
5373	2-Propyn-1-ol, hexanoate	73
5218	Stearic acid, vinyl ester	-64
5210	10-Undecenoic acid, cyclohexyl ester	62

TABLE I

Code No.	Classification and Name	K Value
ESTERS, CARBOXYLIC ACIDS		
Unsubstituted		
	Polybasic Acids	
5821*	Aconitic acid, triallyl ester	98
5852	Bicyclo[2.2.1]hept-5-ene-2,3-dicarboxylic acid, dibutyl ester	80
4107	ditetradecyl ester	-31
6492	Itaconic acid, diallyl ester	98
3751	dimethyl ester	39
2703	-----, diester with allyl lactate	93
6694	Malonic acid, benzylidene-, dimethyl ester	100
4831, 5110	-----, ethylidene-, diethyl ester	86, <u>99</u>
3396	Octadecanedioic acid, diethyl ester	7
5853	Phthalic acid, diallyl ester	96
3312	di(6-methylheptyl) ester	-6
6978	Sebacic acid, diethyl ester	47
6774	Succinic acid, dibutyl ester	53
6378*	Terephthalic acid, diallyl ester	98
4541, 5366	Tricarballylic acid, triallyl ester	<u>100</u> , <u>100</u>
Monosubstituted		
	Acids	
6493	Itaconic acid, $\beta$ -monoallyl ester	100
6389	Phthalic acid, monobutyl ester, copper(II) salt	67
6388	Succinic acid, $\alpha$ -dodecenyl-, monobutyl ester	84
	Alcohols	
6491	Citric acid, triallyl ester	88
4169	Hydrocinnamic acid, $\beta$ -ethyl- $\beta$ -hydroxy-, ethyl ester	54
3275	Lactic acid, dodecyl ester	32
	Amides	
4841	Acetamide, N-2-(1-acetoxy-2-methylpropyl)-	61
4816	-----, N-[2,5-bis(acetoxy)pentyl]-	28
4828	-----, N-bis(ethoxycarbonyl)methyl-	29
4934	-----, N,N'-2,7-(2,7-dimethyloctylene)- bis[2-ethoxycarbonyl]-	63
5518	-----, N-(ethoxycarbonylmethyl)-2-mesityl-	49
3441	Acetanilide, p-ethoxycarbonyl-	59
6121	-----, m-hydroxy-, acetate	47
5041	-----, p-hydroxy-, acetate	69
3294	Lactamide, acetate	24
3295	-----, N-butyl-, lauric acid ester	14
4572	-----, N-tert-butyl-, acetate	89

TABLE I

Code No.	Classification and Name	K Value
ESTERS, CARBOXYLIC ACIDS		
Monosubstituted		
Amides		
4118	Lactanilide, $\alpha$ -ethylcaproic acid ester	57
5171, 5483	Oxanilic acid, ethyl ester	58, 41
4677	Palmitamide, $N$ -(2-hydroxyethyl)-, acetate	-2
Amines		
3857	p-Aminobenzoic acid, butyl ester	46
3387	Anthranilic acid, methyl ester	49
5752	Crotonic acid, 3-(methylamino)-, allyl ester	71
5167	Methacrylic acid, 2-(diethylamino)ethyl ester	77
3268	Oxalic acid, ester with p-(dimethylamino)phenol	71
Carbamates		
6300	Ethylene glycol, monoacetate, monocarbanilate	61
5184	Hydracrylic acid, carbanilate, butyl ester	73
4900	Lactic acid, carbanilate, benzyl ester	55
5183	-----, 2-methyl-, carbanilate, ethyl ester	71
5916	Mandelic acid, carbanilate, butyl ester	45
Ethers		
5384	Acetic acid, phenoxy-, 2-phenoxyethyl ester	-57
6294	Cinnamic acid, 3,4-dimethoxy-, methyl ester	52
5205	Eugenyl alcohol, benzoate	16
5905	Ferulic acid, acetate, ethyl ester	14
5904	methyl ester	47
5331	Malonic acid, ethoxymethylene-, diethyl ester	82
Halides		
4108	Acetic acid, chloro-, pentachlorophenyl ester	88
5509	Acrylic acid, 2-chloro-3-hydroxy-, benzoate, ethyl ester	92
4821	Adipic acid, bis(x-chloroallyl) ester	84
2850	1-Apocamphaneethanol, 2-chloro-, acetate	57
5203	Benzoic acid, p-bromophenyl ester	-109
5209	-----, o-chloro, cyclohexyl ester	72
5206	Benzyl alcohol, 3,4-dichloro-, hexanoate	66
3086	Fumaric acid, bis(2-chloroethyl) ester	79
3111	Maleic acid, chloro-, bis(2-chloroethyl) ester	95
5438*	-----, dichloro-, diallyl ester	93
3230	Phthalic acid, tetrachloro-, diethyl ester	88
5208	10-Undecenoic acid, 2-chloroethyl ester	27

TABLE I

Code No.	Classification and Name	K Value
ESTERS, CARBOXYLIC ACIDS		
Monosubstituted		
Heterocyclic Compounds		
3406	$\alpha$ -Celllobiose, octaacetate	-10
5542	1 <i>H</i> -Cyclopenta[ <i>b</i> ]quinoxaline-1,3-dicarboxylic acid, 2,3-dihydro-, diethyl ester	42
5319, 5774	2-Furanmethanol, diacetate	81, 60
5307, 5781	dibutyrate	68, 66
5780	dipropionate	59
5306	Furfuryl alcohol, acetate	59
5308	butyrate	66
4973	2-Furoic acid, allyl ester	98
4844	butyl ester	60
4972	decyl ester	63
6822	docosyl ester	17
4860, 5215	ethyl ester	48, 38
6820	hexadecyl ester	58
4969	hexyl ester	69
4970	isopentyl ester	67
4964	isopropyl ester	61
4843	methyl ester	79
6821	octadecyl ester	34
4971	octyl ester	64
4848	propyl ester	47
7273	2-Indolecarboxylic acid, ethyl ester	76
5418	Morpholinosuccinic acid, dibutyl ester	44
6278	Octadecanoic acid, 9,10,12,13-diepoxy-, methyl ester	18
6008	7-Oxabicyclo[4.1.0]heptane-2-decanoic acid, 5-butyl- 3(and 4)-carboxy-, 1-epoxy-, diethyl ester	29
6009	and 7-Oxabicyclo[4.1.0]heptane-2-octanoic acid, 3(and 4)-carboxy-5-(1,2-epoxyhexyl)-, diethyl ester	34
6304	3-Piperidinol, 1-ethyl-, diphenylacetate, hydrochloride	35
6311	ester with $\alpha$ -phenylcyclohexaneacetic acid, hydrochloride	95
6310	-----, 1-methyl-, diphenylacetate, hydrochloride	67
5383	Piperonyl alcohol, $\alpha$ -benzyl-, formate	100
6208	-----, $\alpha$ - <i>tert</i> -butyl-, pivalate	78
4167	Pyran-2-malonic acid, tetrahydro-, diethyl ester	35
7135	3-Pyridineacetic acid, ethyl ester	83
5347	3,5-Pyridinedicarboxylic acid, 2,6-dimethyl-, diethyl ester	61
5346	3,5-Pyrroledi-carboxylic acid, 2,4-dimethyl-, diethyl ester	76
5421	Tricarballylic acid, $\beta$ -morpholino-, triallyl ester	98
5417	triethyl ester	32

TABLE I

Code No.	Classification and Name	K Value
ESTERS, CARBOXYLIC ACIDS		
Monosubstituted		
Hydrazines and Derivatives		
5796*	Acetic acid, hydrazino-, methyl ester, hydrochloride	95
4898	Carbazic acid, 3-methyl-3-phenyl-, isopropyl ester	98
4365, 5484	-----, 3-phenyl-, isopropyl ester	96, 68
Imides		
7009	Maleimide, <u>N</u> -acetoxyethyl-	95
6737*	-----, <u>N</u> -propionyloxymethyl-	98
4731	Phthalimide, <u>N</u> -2-hydroxyethyl-, oleate	8
4732	stearate	-116
5108	Succinimide, <u>N</u> -(2-acetoxyethyl)-	50
4730	-----, <u>N</u> -(2-hydroxy-1,1-dimethylethyl)-, oleate	66
Ketones		
5106	Acetoacetic acid, allyl ester	90
4884	1,3-Cyclopentanedicarboxylic acid, 4,5-dioxo-, diethyl ester	57
2907	Hydratropic acid, $\beta$ -(4-biphenylcarbonyl)-, methyl ester	50
3311	Pimelic acid, $\gamma$ -oxo-, dibutyl ester	31
3308	didodecyl ester	-58
3310	diethyl ester	42
3309	dimethyl ester	24
6439	Pinonic acid, dodecyl ester	-20
Lactams		
4936	3-Pyrazolecarboxylic acid, 5-oxo-, ethyl ester	55
4018	4-Pyridazineacetic acid, 1,2,3,6-tetrahydro-3,6-dioxo-2-phenyl-, ethyl ester	13
Lactones		
3470	Acetic acid, phthalidylidene-, ethyl ester	-4
2791	$\alpha$ -Conidendrol, tetraacetate	64
2793	tetrabenzoate	10
2792	$\beta$ -Conidendrol, tetraacetate	30
3775	Coumaric acid, methyl ester	27
Nitriles		
4842	Acrylic acid, 2-cyano-3-phenyl-, ethyl ester	78
3738, 4852	Cinnamic acid, $\alpha$ -cyano-, ethyl ester	53, 66
5906	Cinnamyl alcohol, cyanoacetate	41
3755	Fumaric acid, di(2-cyanoethyl) ester	4
3211		67

TABLE I

Code No.	Classification and Name	K Value
ESTERS, CARBOXYLIC ACIDS		
Monosubstituted		
	Nitriles	
4928	3-Pentenenitrile, 2-hydroxy-, acetate	63
4480	Pimelic acid, $\gamma,\gamma$ -dicyano-, diallyl ester	100
4832	Propionitrile, 2-hydroxy-3-methyl-, acetate	6
4829*, 5116		100, 100
6443*	Tartronitrile, methyl-, acetate	99
	Nitro Compounds	
4404	Benzoic acid, p-nitro-, p-nitrophenyl ester	39
4405	m-tolyl ester	91
6301	Cinnamic acid, m-nitro-, ethyl ester	45
5907	-----, p-nitro-, methyl ester	54
3947	o-Cresol, 4,6-dinitro-, acetate	97
	Quaternary Nitrogen Compounds	
	Ammonium compounds.	
3357	benzyl(carboxymethyl)dimethyl----- chloride, tetradecyl ester	94
5419	pentamethylenebis[(2-hydroxyethyl)dimethyl- ----- iodide, diacetate	53
	Piperidinium compounds.	
3356	1-carboxymethyl-1-methyl----- chloride, tetradecyl ester	23
	Sulfides	
4717	Propionic acid, 3,3'-thiodi-, bis(1-methyl- heptyl) ester	55
4716	dibutyl ester	65
4715	diethyl ester	65
	Sulfones	
3293	Benzoic acid, p,p'-sulfonyldi-, dibutyl ester	-22
5046	Phenol, 4,4'-sulfonyldi-, diacetate	62
	Thiocarbamates	
5142	Acetic acid, dibutyldithiocarbamoyl-, ethyl ester	84
5140	-----, diethyldithiocarbamoyl-, ethyl ester	90
5141	-----, dimethyldithiocarbamoyl-, butyl ester	92
5143	ethyl ester	65
	Thiocyanates	
5674	Acetic acid, thiocyanato-, 1,3-dimethylbutyl ester	93
5668	Benzoic acid, thiocyanatomethyl ester	99
5663	Dodecanoic acid, thiocyanatoethyl ester	75

TABLE I

Code No.	Classification and Name	K Value
ESTERS, CARBOXYLIC ACIDS		
Monosubstituted		
Thiocyanates		
5673	Octanoic acid, 2-thiocyanatoethyl ester	83
5672	Propionic acid, 3-thiocyanato-, ethyl ester	65
5671	methyl ester	77
Thioureas		
3467	Acetic acid, (5-pseudothiohydantoinyl)-, 2-ethylhexyl ester	25
5634	Pseudourea, 2-ethoxycarbonyl-2-thio-, picrate	98
3707	4-Thiazolecarboxylic acid, 2-amino-, ethyl ester	55
Ureas		
6747	Fumaramic acid, N-carbamoyl-, methyl ester	82
6746	Maleamic acid, N-carbamoyl-, dodecyl ester	19
6742	methyl ester	84
6749	----, N-( <u>tert</u> -butylcarbamoyl)-, isopropyl ester	87
6748	methyl ester	79
Miscellaneous		
5929	Acetoacetic acid, thiosemicarbazone, ethyl ester	100
3263	Caproic acid, $\alpha$ -oxo-, oxime, ethyl ester	86
6295	Gentisic acid, x- <u>tert</u> -butyl-, propyl ester	84
3246	Tartaric anhydride, diacetate	11
Disubstituted		
Amide-Halides		
4414	Oxanilic acid, 4'-chloro-, ethyl ester	73
5931	----, 3'-chloro-, isopropyl ester	35
Amide-Nitriles		
5335	Acrylic acid, 3-( <u>p</u> -acetamidophenyl)-2-cyano-, ethyl ester	-15
5515	Phenaceturic acid, $\alpha$ -cyano-, ethyl ester	59
Carbamate-Halides		
6044	Carbanilic acid, 5-chloro-2-methyl-, 2-propynyl ester	80
4918	Lactic acid, carbanilate, 2-chloroethyl ester	79
5294	----, m-chlorocarbanilate, 2-chloroethyl ester	93
5298	cyclohexyl ester	77

TABLE I

Code No.	Classification and Name	K Value
ESTERS, CARBOXYLIC ACIDS		
Disubstituted		
Ether-Halides		
5201	Benzoic acid, $\alpha$ -ethoxy-, p-chlorophenyl ester	75
6296	Cinnamic acid, $\alpha$ -bromo-3,4-dimethoxy-, methyl ester	51
3103	Fumaric acid, bis[2-(2-chloroethoxy)ethyl] ester	57
6299	Hydrocinnaemic acid, $\alpha$ -bromo- $\beta$ ,3,4-trimethoxy-, methyl ester	24
6297	-----, $\alpha$ , $\beta$ -dibromo-3,4-dimethoxy-, methyl ester	26
3110	Maleic acid, bis[2-(2-chloroethoxy)ethyl] ester	81
3030	1,2-Propanediol, 3-pentachlorophenoxy-, diacetate	83
5207	Propanol, 3-(3-phenoxypropoxy)-, bromoacetate	84
Ether-Lactones		
2789	$\alpha$ -Conidendrin, diacetate	41
2790	$\beta$ -Conidendrin, diacetate	20
Ether-Phenols		
5903	Ferulic acid, ethyl ester	29
5902	methyl ester	30
Halide-Heterocyclic Compounds		
6521*	2-Furoic acid, 2-chloroethyl ester	95
7168	-----, 3,4-dichloro-, ethyl ester	78
4846	-----, 2,3,4,5-tetrachlorotetrahydro-, butyl ester	100
6827	2-chloroethyl ester	100
6826	docosyl ester	10
6823	dodecyl ester	29
4859	ethyl ester	97
6824	hexadecyl ester	95
4845	methyl ester	100
6825	octadecyl ester	97
5162, 5386	octyl ester	100
4647	propyl ester	100
5202	Piperonyl alcohol, p-chlorobenzoate	47
Halide-Hydrazines		
4374	Carbazic acid, 2-(2,5-dichlorophenyl)-, isopropyl ester	58
4914	-----, 3-phenyl-, 2-chloroethyl ester	52
5554	-----, 3-(2,4,6-trichlorophenyl)-, isopropyl ester	90
Halide-Ketones		
3088	Acetophenone, 2-bromo-3'-hydroxy-, benzoate	47
3089	-----, 2-bromo-4'-hydroxy-, benzoate	59

TABLE I

Code No.	Classification and Name	K Value
ESTERS, CARBOXYLIC ACIDS		
Disubstituted		
Halide-Nitro Compounds		
4903	Benzoic acid, 2,4-dichloro-, <u>o</u> -nitrophenyl ester	18
4460	-----, <u>p</u> -nitro-, <u>p</u> -chlorophenyl ester	23
4878	Phenol, 2,3,5,6-tetrachloro-4-nitro-, acetate	<u>87</u>
Halide-Sulfides		
4753	Acetic acid, chloro-, diester with 4,4'-thiodiphenol	90
5146	-----, pentachlorophenylthio-, methyl ester	<u>80</u>
Halide-Thiocarbamates		
5145	Acetic acid, dibutyldithiocarbamoyl-, <u>p</u> -chloro-phenyl ester	72
5144	-----, diethyldithiocarbamoyl-, <u>p</u> -chlorophenyl ester	<u>100</u>
5444	Carbamic acid, dithio-, ethylenebis- <u>S,S'</u> -bis(2-bromo-ethoxycarbonyl)	83
Heterocyclic-Nitro Compounds		
4007, 5787	2-Furanmethanediol, 5-nitro-, diacetate	57, 72
5804	dipropionate	86
4006, 5790	Furfuryl alcohol, 5-nitro-, acetate	<u>85</u> , 86
4662	-----, tetrahydro-, <u>p</u> -nitrobenzoate	89
4967	2-Furoic acid, 5-nitro-, ethyl ester	100
5792, 6828	methyl ester	92, <u>97</u>
5785, 6829	propyl ester	<u>94</u> , 99
4664	2-Pyridineethanol, <u>m</u> -nitrobenzoate	80
Sulfonic Acid-Ureas		
6757	Succinamic acid, <u>N</u> -( <i>tert</i> -butylcarbamoyl)-2(or 3)-sulfo-, sodium salt, dodecyl ester	56
6756	isopropyl ester	43
6755	methyl ester	66
6754	-----, <u>N</u> -carbamoyl-2(or 3)-sulfo-, sodium salt, dodecyl ester	-16
6753	methyl ester	-27
Miscellaneous		
4407	Acetoacetic acid, $\alpha,\alpha$ -bis(2-cyanoethyl)-, methyl ester	63
2890	-----, $\alpha$ -[bis[ <u>p</u> -(dimethylamino)phenyl]methyl]-, ethyl ester	32
5910	Acetonitrile, (4-hydroxy-3-methoxyphenyl)-, acetate	33
5343	Acrylic acid, 3-( <u>m</u> -chloroanilino)-2-(ethoxy-carbonyl)-, ethyl ester	46

TABLE I

Code No.	Classification and Name	K Value
ESTERS, CARBOXYLIC ACIDS		
Disubstituted		
	Miscellaneous	
6623	Benzoic acid, <u>p</u> -amidino-, ethyl ester, hydrochloride	79
6699	-----, 3,5-bis[(dimethylamino)methyl]-4-hydroxy-, methyl ester	60
5878	-----, <u>p</u> -[bis(2-hydroxyethyl)amino]-, ethyl ester	43
6477	2H-1-Benzopyran-3-carboxylic acid, 8-allyl-2-oxo-, 2-(dibenzylamino)ethyl ester, hydrochloride	58
5525	Cinnamic acid, 4-acetoxy-3-methoxy-	31
5543	1,3-Cyclopentanedicarboxylic acid, 4-(phenylamino)-5-oxo-, diethyl ester	41
5561	Ethanol, 2,2'-dithiodi-, bis( <u>p</u> -nitrobenzoate)	27
6743	Fumaramic acid, <u>N</u> -carbamoyl-, 2-chloroethyl ester	65
6744	2-nitrobutyl ester	57
5779	2-Furanacrylic acid, <u>cis/trans</u> - $\alpha$ -acetyl-, ethyl ester	94
3804	-----, $\alpha$ -cyano-, ethyl ester	62
4096	2-Imidazolineethanol, with 2-decyl and 2-dodecyl acetates	90
5186	Lactic acid, <u>m</u> -cyanocarbanilate, butyl ester	82
5247	-----, 2-methoxy-5-methylcarbanilate, butyl ester	87
6758	Maleamic acid, <u>N</u> -carbamoyl-, 2-hydroxyethyl ester	52
6745	2-( <u>p</u> -octylphenoxy)ethyl ester	74
5516	Malonic acid, (2-phenylacetamido)-, monoethyl ester, sodium salt	45
5370	Mandelic acid, 2-chloroethyl ester	80
	Piperidinium compounds.	
6302	1-ethyl-3-hydroxy-1-methyl----- bromide, benzilic acid ester	86
5036	5-Pyrimidinecarboxylic acid, 1,2,3,4-tetrahydro-4-oxo-2-thioxo-, ethyl ester	88
3351	Pyruvic acid, ( <u>p</u> -nitrophenyl)-, methyl ester	1
7272	Salicylic acid, 5-nitro-, ethyl ester	44
3743	-----, 2-thenyl ester	59
	Poly substituted	
3970	Acetic acid, diethyldithiocarbamoyl-, 2-(pentachlorophenoxy)ethyl ester	27
3965	-----, thiocyanato-, 2-(pentachlorophenoxy)-ethyl ester	35
4119	Acetoacetic acid, 2-(2,2,2-trichloro-1-hydroxyaminoethyl)-, ethyl ester	45
5301	Furfuryl alcohol, 5-nitro-, bromacetate	39
2754	chloroacetate	70
5300	<u>p</u> -chlorobenzoate	30

TABLE I

Code No.	Classification and Name	K Value
ESTERS, CARBOXYLIC ACIDS		
Disubstituted		
Miscellaneous		
6623	Benzoic acid, p-amidino-, ethyl ester, hydrochloride	79
6699	-----, 3,5-bis[(dimethylamino)methyl]-4-hydroxy-, methyl ester	60
5878	-----, p-[bis(2-hydroxyethyl)amino]-, ethyl ester	43
6477	2H-1-Benzopyran-3-carboxylic acid, 8-allyl-2-oxo-, 2-(dibenzylamino)ethyl ester, hydrochloride	58
5525	Cinnamic acid, 4-acetoxy-3-methoxy-	31
5543	1,3-Cyclopentanedicarboxylic acid, 4-(phenylamino)-5-oxo-, diethyl ester	41
5561	Ethanol, 2,2'-dithiodi-, bis(p-nitrobenzoate)	27
6743	Fumaramic acid, N-carbamoyl-, 2-chloroethyl ester	65
6744	2-nitrobutyl ester	57
5779	2-Furanacrylic acid, cis/trans- $\alpha$ -acetyl-, ethyl ester	94
3804	-----, $\alpha$ -cyano-, ethyl ester	62
4096	2-Imidazolineethanol, with 2-decyl and 2-dodecyl acetates	90
5186	Lactic acid, m-cyanocarbanilate, butyl ester	82
5247	-----, 2-methoxy-5-methylcarbanilate, butyl ester	87
6758	Maleamic acid, N-carbamoyl-, 2-hydroxyethyl ester	52
6745	2-(p-octylphenoxy)ethyl ester	74
5510	Malonic acid, (2-phenylacetamido)-, monoethyl ester, sodium salt	45
5370	Mandelic acid, 2-chloroethyl ester	80
6302	Piperidinium compounds. 1-ethyl-3-hydroxy-1-methyl----- bromide, benzilic acid ester	86
5036	5-Pyrimidinecarboxylic acid, 1,2,3,4-tetrahydro-4-oxo-2-thioxo-, ethyl ester	88
3351	Pyruvic acid, (p-nitrophenyl)-, methyl ester	1
7272	Salicylic acid, 5-nitro-, ethyl ester	44
3743	-----, 2-thenyl ester	59
Polysubstituted		
3970	Acetic acid, diethyldithiocarbamoyl-, 2-(pentachlorophenoxy)ethyl ester	97
3965	-----, thiocyanato-, 2-(pentachlorophenoxy)-ethyl ester	85
4119	Acetoacetic acid, 2-(2,2,2-trichloro-1-hydroxyaminoethyl)-, ethyl ester	45
5301	Furfuryl alcohol, 5-nitro-, bromoacetate	89
2754	chloroacetate	70
5300	p-chlorobenzoate	30

TABLE I

Code No.	Classification and Name	K Value
ESTERS, CARBOXYLIC ACIDS		
Polysubstituted		
5302	Furfuryl alcohol, 5-nitro-, <i>x</i> -chloropropionate	78
6298	Hydracrylic acid, 2-bromo-3-(3,4-dimethoxyphenyl)-, methyl ester	9
5936	Lactic acid, <i>m</i> -chlorocarbanilate, 2-(2,4-dichlorophenoxy)ethyl ester	74
5997	-----, <i>m</i> -methylcarbanilate, 2-(2,4-dichlorophenoxy)ethyl ester	48
3969	Morpholinocarbodithioic acid, ester with 2-(pentachlorophenoxy)ethyl mercaptoacetate	78
3984	3-Quinolinecarboxylic acid, 8-chloro-4-hydroxy-7-methyl-, ethyl ester	28
6472	Salicylic acid, 5-bromo-3-phenyl-, 2-(diisopropylamino)ethyl ester, hydrochloride	71
6487	-----, 5-iodo-3-phenyl-, 2-(diisopropylamino)ethyl ester, hydrochloride	65
ETHERS		
Unsubstituted		
7205	Anisole, <i>p</i> -methyl-	71
3142	Benzene, <i>p</i> -bis(allyloxy)-	93
2904	-----, <i>p</i> -dibutoxy-	-31
2902	-----, <i>p</i> -diethoxy-	46
2901	-----, <i>p</i> -dimethoxy-	43
2841	Ethane, 1,2-bis(2-biphenylyloxy)-	20
3072	-----, 1,2-diphenoxy-	40
4158	Ether, bis(diphenylmethyl)	22
3384	-----, <i>p</i> -tert-butylphenyl phenyl	24
4195	-----, phenyl	97
7207	Veratrole	58
Monosubstituted		
Acid Anhydrides		
3378	Hemipic anhydride	-52
6771	Succinic anhydride, <i>p</i> -methoxybenzyl-	-36
Acids		
4540	Acetic acid, [ <i>o</i> -(1-butenyl)phenoxy]-	95
3399	-----, 2,3-dimethoxytetramethylenebis-, mercury(II) salt	<u>100</u>

TABLE I

Code No.	Classification and Name	K Value
ETHERS		
Monosubstituted		
Acids		
6816	2-Biphenylcarboxylic acid, 2'-methoxy-	37
6360	Cinnamic acid, 3,4-dimethoxy-	42
5492	-----, 4-methoxy-	-36
5502	-----, 2-methoxy- $\alpha$ -methyl-	47
5163	Propionic acid, 2-benzylxy-	72
3380	-----, 2-( <i>p</i> - <i>tert</i> -butylphenoxy)-	81
2831	-----, 2-phenoxy-	61
3335	Veratric acid	20
Alcohols		
7204	Benzyl alcohol, <i>p</i> -methoxy-	80
4474	Ethanol, 2-(2-biphenylxyloxy)-	52
4709	-----, 2,2'-(isopropylidenebis( <i>p</i> -phenyleneoxy)]di-	59
3943	-----, 2-( <i>x,x</i> -xylyloxy)-	76
2837	1-Propanol, 3-(1-naphthyloxy)-	73
2839	2-Propanol, 1-(4-biphenylxyloxy)-	-48
3381	-----, 1-( <i>p</i> - <i>tert</i> -butylphenoxy)-	59
3709	-----, 1-( <i>p</i> -cyclohexylphenoxy)-	39
Aldehydes		
7209	Benzaldehyde, <i>o</i> -methoxy-	55
3249	Glutaraldehyde, $\alpha$ -methoxymethyl- $\alpha$ , $\gamma$ -dimethyl-	36
3252	1-Naphthaldehyde, 2-ethoxy-	-1
Amides		
6124	Acetanilide, 2',5'-diethoxy-	68
6123	-----, 2',5'-dimethoxy-	53
4999	Anisamide, <i>N</i> -allyl-	95
6102	-----, <i>N</i> -benzyl-	57
6103	-----, <i>N</i> -cyclohexyl-	50
6100	-----, <i>N,N</i> -diethyl-	84
6101	-----, <i>N,N</i> -disopropyl-	79
4987	-----, <i>N</i> -ethyl-	75
4997	-----, <i>N</i> -isobutyl-	80
4990	-----, <i>N</i> -isopropyl-	96
4988	-----, <i>N</i> -methyl-	74
4989	-----, <i>N</i> -propyl-	88
6104	Anisanilide	38
5005	<i>p</i> -Anisanisidine	-39
6189	Benzamide, <i>N</i> -benzyl- <i>o</i> -ethoxy-	78
6220	-----, <i>N</i> -benzyl- <i>p</i> -ethoxy-	5
6185	-----, <i>N</i> -butyl- <i>o</i> -ethoxy-	76
6215	-----, <i>N</i> -butyl- <i>p</i> -ethoxy-	75

TABLE I

Code No.	Classification and Name	K Value
ETHERS		
Monosubstituted		
Amides		
6193	Benzamide, <u>N</u> -sec-butyl- <u>o</u> -ethoxy-	84
6218	-----, <u>N</u> -sec-butyl- <u>p</u> -ethoxy-	45
6203	-----, <u>N</u> -cyclohexyl- <u>o</u> -ethoxy-	50
6219	-----, <u>N</u> -cyclohexyl- <u>p</u> -ethoxy-	38
6194	-----, <u>N,N</u> -dibenzyl- <u>o</u> -ethoxy-	28
6188	-----, <u>N,N</u> -dibutyl- <u>o</u> -ethoxy-	85
6216	-----, <u>N,N</u> -dibutyl- <u>p</u> -ethoxy-	83
6207	-----, <u>N,N</u> -dicyclohexyl- <u>o</u> -ethoxy-	83
7140	-----, <u>o</u> -ethoxy-	80
6213	-----, <u>p</u> -ethoxy- <u>N,N</u> -diethyl-	63
4798	-----, 2-ethoxy- <u>x,x</u> -diethyl-	74
6192	-----, <u>o</u> -ethoxy- <u>N,N</u> -diisopropyl-	51
6210	-----, <u>p</u> -ethoxy- <u>N,N</u> -dimethyl-	60
6222	-----, <u>p</u> -ethoxy- <u>N,N</u> -dipentyl-	77
6187	-----, <u>o</u> -ethoxy- <u>N,N</u> -dipropyl-	82
6214	-----, <u>p</u> -ethoxy- <u>N,N</u> -dipropyl-	79
6191	-----, <u>o</u> -ethoxy- <u>N</u> -isobutyl-	88
6217	-----, <u>p</u> -ethoxy- <u>N</u> -isobutyl-	61
6195	-----, <u>o</u> -ethoxy- <u>N</u> -isopropyl-	58
6211	-----, <u>p</u> -ethoxy- <u>N</u> -methyl	30
6221	-----, <u>p</u> -ethoxy- <u>N</u> -pentyl-	51
6190	-----, <u>o</u> -ethoxy- <u>N</u> -propyl-	90
6212	-----, <u>p</u> -ethoxy- <u>N</u> -propyl-	55
6205	Benzanilide, <u>N</u> -butyl-2-ethoxy-	88
6206	-----, 2-ethoxy- <u>N</u> -ethyl	39
6204	-----, 2-ethoxy- <u>N</u> -methyl-	28
5006	<u>o</u> -Benzanisidide, 4-methoxy-	38
5001	<u>m</u> -Benzotoluidide, 4-methoxy-	71
5002	<u>o</u> -Benzotoluidide, 4-methoxy-	21
5003	<u>p</u> -Benzotoluidide, 4-methoxy-	27
5073	<u>o</u> -Butyranisidide	100
6155	<u>p</u> -Butyranisidide	64
6157	<u>o</u> -Butyrophenetidide	56
4758, 6156	<u>p</u> -Butyrophenetidide	53, 32
5426	Decanediamide, <u>N,N</u> -bis(3,4-dimethoxyphenyl)-	42
6183	<u>p</u> -Formanisidide	52
6184	<u>o</u> -Formophenetidide	59
5961	Phthalamide, <u>N,N'</u> -bis( <u>p</u> -methoxyphenyl)-	81
4991	Piperidine, 1-( <u>p</u> -anisoyl)-	94

TABLE I

Code No.	Classification and Name	K Value
ETHERS		
Monosubstituted		
Amines		
4545	Allylamine, 2(or 3)-allyloxy- <u>N,N</u> -dimethyl-	83
6227	Aniline, 2,5-dimethoxy-	89
4564	-----, p-hexyloxy-, benzenesulfonate	97
4183	-----, 4,4'-(p-methoxy)benzylidenebis[ <u>N,N</u> -dimethyl-	83
3574	-----, 4,4'-oxydi-	32
3575	-----, N-(2-phenoxyethyl)-	66
5955	o-Anisidine, hydrochloride	71
4237	Benzidine, 3,3'-dimethoxy-	96
3444	Benzylamine, <u>N</u> -(2,5-dimethoxyphenyl)-	1
7270	Bis(p-methoxyphenethyl)amine, phosphate	64
3094	Butylamine, 4-phenoxy-	87
4893	Dibenzylamine, <u>N</u> -[2-(x,x-diisopropyl- <u>m</u> -tolyloxy)-ethyl]-	
	-----, <u>N</u> -[2-(x,x-diisopropyl- <u>o</u> -tolyloxy)ethyl]-	75
4894	Dodecylamine, <u>N</u> -(p-methoxybenzyl)-, hydrochloride	62
6062	Ethane, 1,2-bis[p-[(hexylmethylamino)methyl]-phenoxy]-, dihydrochloride	83
7160*	Hexane, 1,6-bis[p-[(isopropylamino)methyl]phenoxy]-, dihydrochloride, 1 percent	96
7158	Propane, 1,3-bis[4-[(methylphenethylamino)methyl]-phenoxy]-, dihydrochloride	100
		99
Carbamates		
4679	4,4'-Bicarbanilic acid, 3,3'-dimethoxy-, diisopropyl ester	48
4371	Carbanilic acid, 2,5-diethoxy-, isopropyl ester	61
4875	-----, 2,4-dimethoxy-, isopropyl ester	69
4368	-----, <u>m</u> -ethoxy-, isopropyl ester	65
4571	-----, <u>m</u> -methoxy-, isopropyl ester	79
5286	2-Propanol, 1-phenoxy-, carbanilate	48
Esters		
5384	Acetic acid, phenoxy-, 2-phenoxyethyl ester	57
6294	Cinnamic acid, 3,4-dimethoxy-, methyl ester	52
5205	Eugenyl alcohol, benzoate	16
5905	Ferulic acid, acetate, ethyl ester	14
5204	-----, methyl ester	47
5311	Malonic acid, ethoxymethylene-, diethyl ester	82
Halides		
3027	Anisole, 2,3,4,5,6-pentachloro-	87
4868	-----, 2,4,5-trichloro-	81

TABLE I

Code No.	Classification and Name	K Value
ETHERS		
Monosubstituted		
Halogenes		
3102	Ethane, 1-(2-biphenylyloxy)-2-(2-chloroethoxy)-	49
4383	-----, 2,2-bis(3,5-dichloro-2-methoxyphenyl)-	
	1,1,1-trichloro-	29
2976	-----, 2,2-bis(p-ethoxyphenyl)-1,1,1-trichloro-	32
3104	Ether, benzyl 2-chloroethyl	75
3105	-----, bis(2-bromoethyl)	86
2846, 4207	-----, bis(p-bromophenyl)	51, <u>85</u>
4871	-----, butyl 2,3,5,6-tetrachlorophenyl	79
4141	Methane, bis(p-chlorophenoxy)-	61
3107	Naphthalene, 2-(2-chloroethoxy)-	69
2844, 4218	Phenetole, 8-chloro-	92, 68
7206	-----, p-chloro-	65
2851	-----, 8-chloro-o-phenyl-	70
Heterocyclic Compounds		
4343*	Benzene, p-bis(2,3-epoxypropoxy)-	91
4344*	-----, 2-tert-butyl-1,4-bis(2,3-epoxypropoxy)-	<u>95</u>
4345	-----, 1,4-di-tert-butyl-2,5-bis(2,3-epoxypropoxy)-	60
5305	Ether, ethyl furfuryl	60
5309	-----, furfuryl methyl	31
6440	2,5-Methano-2H-oxireno[a]indene, 4,4'-[oxybis-(ethyleneoxy)]bis{octahydro-	59
7266	2-Pipecoline, 1-(3,4-dimethoxybenzyl)-, hydrochloride	81
7262	-----, 1-(2-methoxy-5-methylbenzyl)-, hydrochloride	78
3079	Propane, 1-(2-biphenylyloxy)-2,3-epoxy-	64
4801	2H-Pyran, 3,4-dihydro-2-isobutoxy-4-methyl-	20
6651	Quinoline, 2-(p-methoxyphenethyl)-	71
6652	-----, 4-(p-methoxyphenethyl)-	74
6653	-----, 6-methoxy-2-(p-methoxyphenethyl)-	66
2760	-----, 8-phenylmercurioxy-	83
6628	-----, 1,2,3,4-tetrahydro-6-methoxy-1-(10-piperidino-decyl)-	91
6627	-----, 1,2,3,4-tetrahydro-6-methoxy-1-(9-piperidino-nonyl)-	27
Hydrazides		
5000	Anisic acid, phenylhydrazide	-40
7101	Benzenesulfonic acid, isopropylidenehydrazide, p,p'-oxybis-	87

TABLE I

Code No.	Classification and Name	K Value
ETHERS		
Monosubstituted		
	Imides	
6357	Pyromellitic acid, diimide, <u>N,N'</u> -bis( <u>m</u> -ethoxyphenyl)-	
6358, 6359	-----, diimide, <u>N,N'</u> -bis( <u>p</u> -ethoxyphenyl)-	39, -7
6355	-----, diimide, <u>N,N'</u> -bis( <u>m</u> -methoxyphenyl)-	-36
6354	-----, diimide, <u>N,N'</u> -bis( <u>o</u> -methoxyphenyl)-	-11
6356	-----, diimide, <u>N,N'</u> -bis( <u>p</u> -methoxyphenyl)-	-59
	Ketones	
6003	3-Buten-2-one, 4-( <u>p</u> -methoxyphenyl)-	50
5274	Chalcone, $\alpha$ -ethyl-4,4'-dimethoxy-	98
2735	-----, 2-methoxy-	67
3074	-----, 4'-methoxy-	28
4164	2-Cyclohexen-1-one, 3-ethoxy-5,5-dimethyl-	64
4358	Cyclopentanone, 2,5-bis( <u>p</u> -methoxybenzylidene)-	32
5524	Propiophenone, 3',4'-dimethoxy-	83
4170	-----, 4'-methoxy-3-phenyl-	8
	Lactones	
3767	1,3-Benzodioxan, 8-methoxy-2-methyl-4-oxo-	39
3435	Coumarin, 6-methoxy-4-methyl-	-5
2787	2-Naphthoic acid, 4-(3,4-dimethoxyphenyl)-1,2,3,4-tetrahydro-3-(hydroxymethyl)-6,7-dimethoxy-, $\gamma$ -lactone (from $\alpha$ -conidendrin)	38
2788	$\gamma$ -lactone (from $\beta$ -conidendrin)	40
	Nitriles	
6017	Acetonitrile, (3,4-dimethoxyphenyl)-	77
5102	Butyronitrile, 2-phenoxy-	64
7076	Malononitrile, 3,4-diethoxybenzylidene-	94
3205	-----, 1-( <u>p</u> -ethoxyphenyl)ethylidene-	88
5081	Propionitrile, 3-( $\alpha$ -nonylphenoxy)-, branched C <sub>9</sub>	93
5082	-----, 3-( <u>p</u> -tolyloxy)-	79
	Nitro Compounds	
4980	Anisole, 5-allyl-2-(2,4-dinitrophenoxy)-	53
3887	-----, 3,5-dinitro-	78
3816	-----, $\alpha$ -(2-nitrovinyl)-	95
4765	Benzene, 1-allyl-4-(2,4-dinitrophenoxy)-3-methoxy-	44
4766	-----, <u>p</u> -bis(2,4-dinitrophenoxy)-	46
4085	1-Butene, 1-( <u>p</u> -methoxyphenyl)-2-nitro-	75

TABLE I

Code No.	Classification and Name	K Value
ETHERS		
Monosubstituted		
Nitro Compounds		
4977	Ether, benzyl 2,4-dinitrophenyl	96
4767	-----, 2-biphenyl 2,4-dinitrophenyl	52
4768	-----, 4-biphenyl 2,4-dinitrophenyl	60
4978	-----, cyclohexyl 2,4-dinitrophenyl	94
4769	-----, 2-cyclohexyl-4,6-dinitrophenyl 2,4-di-nitrophenyl	75
4508	-----, o-cyclohexylphenyl 2,4-dinitrophenyl	75
4421	-----, 2,4-dinitrophenyl m-nitrophenyl	80
4422	-----, 2,4-dinitrophenyl 2-nitro-p-tolyl	64
7208	-----, o-nitrophenyl phenyl	96
4426	Naphthalene, 1,5-bis(2,4-dinitrophenoxy)-	36
7147*	Styrene, 3,4-dimethoxy-β-nitro-	86
7149*	Veratrole, 4-(2-nitropropenyl)-	97
Quaternary Nitrogen Compounds		
Ammonium compounds.		
4718	benzyldimethyl[2-[2-[p-(1,1,3,3-tetramethylbutyl)-phenoxy]ethoxy]ethyl]----- thiocyanate	98
6566	ethyldimethyl[2-[2-(p-octylphenoxy)ethoxy]-ethyl]----- 1-dodecanesulfonate	82
4331	trimethyl[2-[2-[x-(1,1,3,3-tetramethylbutyl)-phenoxy]ethoxy]ethyl]----- bromide	89
4333	Glycine, [2-[2-[p-(1,1,3,3-tetramethylbutyl)phenoxy]-ethoxy]ethyl]betaine	60
Quinones		
4131	p-Benzoquinone, p-ethoxyphenyl-	52
3127	1,4-Naphthoquinone, 2-methoxy-	85
Thiocarbamates		
3968	Carbamic acid, diethyldithio-, diester with 2,2'-oxydiethanethiol	95
7091	-----, dimethyldithio-, 2-(p-tolyloxy)ethyl ester	49
3967	4-Morpholinecarbodithioic acid, diester with 2,2'-oxydiethanethiol	63
Thiocyanates		
5675	Ethane, 1,2-bis(2-thiocyanatoethoxy)-	96
3959, 5661	Ether, bis(2-thiocyanatoethyl)	51, 89
5662*	-----, 2-butoxyethyl 2-thiocyanatoethyl	98
5664	-----, 2-(p-octylphenoxy)ethyl 2-thiocyanatoethyl	85
3797	-----, phenyl 2-thiocyanatoethyl	79

TABLE I

Code No.	Classification and Name	K Value
ETHERS		
Monosubstituted		
	Thioureas	
5123, 5396	Benzothiazole, 2-amino-5,6-dimethoxy-	<u>100</u> , <u>100</u>
3366	-----, 2-(p-methoxyanilino)-	<u>10</u>
5654	Ether, bis[2-[1-propionyl-2-imidazolin-2-yl]thio]-ethyl]	70
4750	2-Imidazoline, 2,2'-ethylenebis(oxyethylenethio)di-, dihydrochloride	71
5431	-----, 1-(methoxymethyl)-2-(methoxymethylthio)-	50
5657	-----, 2-[2-[2-(p-octylphenoxy)ethoxyethyl]thio]-, hydrochloride	85
5656	-----, 2-[2-(2-phenoxyethoxyethyl]thio]-	76
5707	Pseudourea, 1,2-dimethyl-2-thio-1-(2-vinyloxyethyl)-, hydroiodide	99
4748	-----, 2-[2-[p-(1,1,3,3-tetramethylbutyl)phenoxy]-ethyl]-2-thio-, hydrobromide	<u>100</u>
	Ureas	
4300	Carbanilide, 2-methoxy-	45
4476	2-Imidazolidone, 1,3-bis(methoxymethyl)-	21
4479	1,3,5,4H-Oxadiazin-4-one, 3,5-bis(butoxymethyl)-tetrahydro-	75
3271	Urea, (3-chloromercuri-2-methoxypropyl)-	69
	Miscellaneous	
3886	p-Anisaldehyde, oxime	81
5818	-----, thiosemicarbazone	76
3137	Benzenesulfonamide, 2,5-dimethoxy-	81
5221	Phenol, 2,6-dimethoxy-4-propenyl-	<u>92</u>
Disubstituted		
	Acid-Halides	
3325	Acetic acid, (4-chloro- <u>o</u> -tolyoxy)-	89
3291	-----, (2,4-dichlorophenoxy)-, nickel(II) salt	42
3029	-----, (pentachlorophenoxy)-	97
5010	-----, (2,3,5,6-tetrachlorophenoxy)-	88
4189	Propionic acid, $\alpha$ -( <u>o</u> -chlorophenoxy)-	19
	Alcohol-Amines	
6622	1-Naphthalenemethanol, $\alpha$ -(2-dibutylamino-1,1-dimethylethyl)-4-methoxy-, hydrochloride	<u>94</u>
6538	-----, $\alpha$ -(dibutylaminomethyl)-2-methoxy-, hydrochloride	<u>92</u>

TABLE I

Code No.	Classification and Name	K Value
ETHERS		
Disubstituted		
Alcohol-Amines		
6658	1-Naphthalenemethanol, $\alpha$ -(dipentylaminomethyl)-2-methoxy-, hydrochloride	96
6536	9-Phenanthrenemethanol, $\alpha$ -(N-butyl-p-methoxyanilinomethyl)-1,2,3,4-tetrahydro-, hydrochloride	85
Alcohol-Halides		
3944	Ethanol, 2-(pentachlorophenoxy)-	94
6441	1,2-Propanediol, 3-(p-chlorophenoxy)-	65
3386	2-Propanol, 1-(p-chlorophenoxy)-	64
Alcohol-Quaternary Nitrogen Compounds		
Ammonium compounds.		
4334	benzyl(2-hydroxyethyl)methyl[2-[2-[x-(1,1,3,3-tetramethylbutyl)phenoxy]ethoxy]ethyl]----- chloride	97
Morpholinium compounds.		
3950	4,4'-oxydiethylenebis[4-(2-hydroxyethyl)]----- chloride	-77
Amide-Amines		
4940	Acetamide, 2-(6-methoxy-m-toluidino)-	74
4838*	p-Acetanisidide, 2'-amino-	97
Amide-Halides		
3576	Acetamide, 2-(2,4-dichlorophenoxy)-	89
4912	Acetanilide, 3'-chloro-2-(pentachlorophenoxy)-	18
6131	o-Acetanisidide, 5'-chloro-	53
5039	p-Anisanilide, 4'-bromo-----, 2'-chloro-----, 3'-chloro-----, 4'-chloro-----, 2',5'-dichloro-----	50
4783, 4992	Benzanilide, 2'-bromo-2-ethoxy-----, 4'-bromo-2-ethoxy-----, 2'-chloro-2-ethoxy-----, 3'-chloro-2-ethoxy-----, 4'-chloro-2-ethoxy-----, 2',5'-dichloro-2-ethoxy-----, 2,4-dichloro-2-ethoxy-----, 2-chloro-----, 2,4-dichloro-----, 3,4-dichloro-----	70, 21, 55, 53, 35, 59, -31, 51, 2, -8, -38, -44, -185, 72, 33, 82, 54, 15
6200		
6201		
6197		
6198		
6199		
6202		
4438		
4453		
4439		
4911		

TABLE I

Code No.	Classification and Name	K Value
ETHERS		
Disubstituted		
	Amide-Nitro Compounds	
4762, 4996	p-Anisanilide, 2'-nitro-	<u>92</u> , 89
4998	-----, 4'-nitro-	<u>54</u>
5972	Phthalamide, <u>N,N'</u> -bis(p-methoxyphenyl)-3-nitro-	<u>44</u>
	Amide-Phenols	
5943	m-Anisamide, 6-hydroxy- <u>N</u> -methyl-	27
6253	Salicylo-p-phenetidide	<u>25</u>
	Amine-Halides	
4562	Aniline, 3-chloro-4-(p-chlorophenoxy)-, hydrochloride	<u>96</u>
4681	Triethylamine, 2-pentachlorophenoxy-	<u>96</u>
	Amine-Heterocyclic Compounds	
6230	Doxylamine, succinate	<u>91</u>
6225	Lepidine, 8-[2-(diethylamino)ethyl]amino]-6-methoxy-, dihydrochloride	<u>95</u>
6226	-----, 6-methoxy-8-[1-methyl-4-(propylamino)-butyl]amino]-, dihydrochloride	<u>87</u>
6280	Quinoline, 8-[(3-aminopropyl)amino]-6-methoxy-, dihydrochloride	<u>90</u>
3995	-----, 8-amino-6-methoxy-, monohydrochloride	<u>81</u>
6387	-----, 8-[6-[(4-benzylpiperazin-1-yl)hexyl]amino]-6-methoxy-, dioxolate	<u>93</u>
6283	-----, 8-[[6-(diallylamino)hexyl]amino]-6-methoxy-	<u>96</u>
6285	-----, 8-[[5-(isopropylamino)pentyl]amino]-6-methoxy-3,4-dimethyl-, dihydropromide	<u>97</u>
6282	-----, 6-methoxy-8-[[5-[(1-methylbutyl)amino]-pentyl]amino]-, monohydrochloride	<u>95</u>
5616	s-Triazine, 2,6-diamino-4-[1-(butoxy)ethyl]methyl-	<u>60</u>
5601*	-----, 2,6-diamino-4-[1-[1-(ethoxy)ethoxy]cyclohexyl]-	<u>93</u>
	Amine-Imides	
5261	Phthalimide, <u>N</u> -[(p-ethoxyanilino)methyl]-	<u>7</u>
5268	-----, <u>N</u> -[(p-methoxyanilino)methyl]-	<u>71</u>
	Amine-Nitriles	
4362	Acetonitrile, 2-(o-anisidino)-	<u>100</u>
5087	Propionitrile, 3-(o-anisidino)-	<u>93</u>
5088	-----, 3-(p-phenetidino)-	<u>83</u>

TABLE I

Code No.	Classification and Name	$\kappa$ Value
ETHERS		
Disubstituted		
Amine-Nitro Compounds		
3885	p-Anisidine, 2,6-dinitro-	74
4369	o-Anisidine, N-(2,4-dinitrophenyl)-	72
4669	Dibenzylamine, N-[2-(2,4-dinitrophenoxy)ethyl]-	84
5279	p-Phenetidine, 2-nitro-	81
Carbamate-Halides		
4880	Carbanilic acid, 5-chloro-2-methoxy-, isopropyl ester	83
5255	-----, 2-methoxy-5-methyl-, 2-chloroethyl ester	95
4920	Ethanol, 2-(2,4-dichlorophenoxy)-, carbanilate	67
5256	m-chlorocarbanilate	73
6323	2-Propanol, 1-chloro-3-isopropoxy-, carbanilate	78
Ester-Halides		
5201	Benzoic acid, o-ethoxy-, p-chlorophenyl ester	75
6296	Cinnamic acid, $\alpha$ -bromo-3,4-dimethoxy-, methyl ester	51
3103	Fumaric acid, bis[2-(2-chloroethoxy)ethyl] ester	57
6299	Hydrocinnamic acid, $\alpha$ -bromo- $\beta$ ,3,4-trimethoxy-, methyl ester	24
6297	-----, $\alpha$ , $\beta$ -dibromo-3,4-dimethoxy-, methyl ester	26
3110	Maleic acid, bis[2-(2-chloroethoxy)ethyl] ester	31
3030	1,2-Propanediol, 3-pentachlorophenoxy-, diacetate	53
5207	Propanol, 3-(3-phenoxypropoxy)-, bromoacetate	84
Ester-Lactones		
2789	$\alpha$ -Conidendrin, diacetate	11
2790	$\beta$ -Conidendrin, diacetate	20
Ester-Phenols		
5903	Ferulic acid, ethyl ester	29
5902	-----, methyl ester	30
Halide-Heterocyclic Compounds		
4323	Propane, 3-(2,4,5-trichlorophenoxy)-1,2-epoxy-	82
4176	Pyran, 3-bromo-2-ethoxytetrahydro-	66
4174	-----, 3-bromotetrahydro-2-methyl-	53
4175	-----, 3,4-dibromo-2-ethoxytetrahydro-	100
Halide-Lactones		
3623	2(5H)-Furanone, 3,4-dichloro-5'-iodoxyloxy-	82
3632	-----, 5,5'-oxybis[3,4-dichloro-	65

TABLE I

Code No.	Classification and Name	K Value
ETHERS		
Disubstituted		
Halide-Nitriles		
5075	Acetonitrile, 2,4-dichlorophenoxy-	100
5080	Propionitrile, $\beta$ -( <u>o</u> -chlorophenoxy)-	<u>84</u>
Halide-Nitro Compounds		
4877	Anisole, 2,3,5,6-tetrachloro-4-nitro-	83
4561	Ether, p-bromophenyl 2,4-dinitrophenyl	17
4786	-----, <u>4</u> -tert-butyl-2-chlorophenyl 2,4-dinitrophenyl	23
4560	-----, p-chlorophenyl 2,4-dinitrophenyl	45
Halide-Thiocyanates		
5676	Butanal, $\beta$ -chloro-, bis[2-(2-thiocyanatoethoxy)-ethyl] acetal	87
5667	Phenetole, p-chloro- $\beta$ -thiocyanato-	<u>100</u>
Halide-Thioureas		
5698	2-Imidazoline, 2-[2-(2-chloroethoxy)ethylthio]-	93
5430	hydrochloride	<u>87</u>
Heterocyclic-Hydrazines		
3976	p-Anisaldehyde, (2-benzothiazolyl)hydrazone	71
4547	Benzaldehyde, <u>o</u> -ethoxy-, 2-benzoxazolylhydrazone	23
Heterocyclic-Nitro Compounds		
6384	Benzothiazole, 2-butoxy-6-nitro-	89
5320	Ether, methyl 5-nitrofurfuryl	<u>84</u>
4979	-----, tetrahydrofurfuryl 2,4-dinitrophenyl	98
4420	Furan, 2-(2,4-dinitrophenoxyethyl)tetrahydro-	<u>100</u>
2736	-----, 2-methoxymethyl-5-nitro-	<u>95</u>
Imine-Phenols		
2984	$\alpha$ -( <u>p</u> -ethoxyphenylimino)-	24
4984	Phenol, <u>o</u> -[( <u>p</u> -methoxybenzylidene)amino]-	72
Lactone-Sulfonic Acid Esters		
2794	$\alpha$ -Conidendrin, di- <u>p</u> -toluenesulfonate	22
2795	$\beta$ -Conidendrin, di- <u>p</u> -toluenesulfonate	15
Nitro-Phenols		
4088	1-Butene, 1-(4-hydroxy-3-methoxyphenyl)-2-nitro-	93
4897	Isoeugenol, $\beta$ -nitro-	<u>83</u>
7148*	Styrene, 4-hydroxy-3-methoxy- $\beta$ -nitro-	<u>88</u>

TABLE I

Code No.	Classification and Name	K Value
ETHERS		
Disubstituted		
Nitro-Thiocyanates		
5666	Phenetole, 4-(1-methylheptyl)-x-nitro-β-(2-thiocyanatoethoxy)-	80
5665	-----, 2-nitro-4- <u>tert</u> -pentyl-β-thiocyanato-	98
Miscellaneous		
4115	Acetamide, 2-(2-hydroxyethoxy)-	28
6648	p-Acetanisidide, 2'-acetyl-	87
7263	Acetic acid, [o-(N-allylcarbamoyl)phenoxy]-	14
5910	Acetonitrile, (4-hydroxy-3-methoxyphenyl)-, acetate	33
2921	o-Anisidine, 5-(ethylsulfonyl)-	32
4178	Benzamide, N-homopiperonyl-3,4,5-trimethoxy-	45
5410	Benzenesulfonic acid, p-methoxy-, p-chlorophenyl ester	51
4475	Benzophenone, 4-(2-hydroxyethoxy)-	62
7090	Carbamic acid, dimethylthio-, 2-(2,4-dichlorophenoxy)-ethyl ester	73
5525	Cinnamic acid, 4-acetoxy-3-methoxy-	31
4379	o-Cresol, 3,4,6-trichloro-α-(2,3,5-trichloro-6-methoxyphenyl)-	42
4478	Ethanol, 2-[2-nitro-4-( <u>tert</u> -pentyl)phenoxy]-	88
3691	Ether, pentachlorophenyl 2-(phenethylthio)ethyl	83
2721	α-D-Glucoside, 1-allyl-	32
5247	Lactic acid, 2-methoxy-5-methylcarbanilate-, butyl ester	87
6745	Maleamic acid, N-carbamoyl-, 2-(p-octylphenoxy)ethyl	74
5830	Maleimide, 2,3-dichloro-N-(2-methoxymethyl)-	97
3338	Opianic acid	35
5677	Orthophosphorus acid, bis[2-(2-thiocyanatoethoxy)-ethyl] ester	82
2880	Phosphoric acid, 2-(2,4-dichlorophenoxy)ethyl diethyl ester	78
6293	1-Propanol, 3-(4-hydroxy-3-methoxyphenyl)-	35
5234	Propiophenone, 2-bromo-3',4'-dimethoxy-	66
Pseudoindolinium compounds.		
4719	2-[2-(2,4-dimethoxyanilino)-methyl-1,3,3-trimethyl-3H-chloride]	66
5555	Rhodanine, 5-vanillylidene-	67
4490	s-Triazine, 2,2'-(oxybis(ethylenethio))bis[4,6-diamino-	25
Polycsubstituted		
5117	Acetic acid, [(2-amino-5-ethoxyphenyl)thio]-	81

TABLE I

Code No.	Classification and Name	K Value
ETHERS		
Polysubstituted		
3970	Acetic acid, diethyldithiocarbamoyl-, 2-(pentachlorophenoxy)ethyl ester	97
3965	-----, thiocyanato-, 2-(pentachlorophenoxy)ethyl ester	85
6642	Acetophenone, 2-(benzylmethylamino)-3'-chloro-4'-ethoxy-, hydrochloride	85
6646	Acridine, 6-chloro-9-[4-(diethylamino)-1-(4-pyridyl)butyl]amino]-2-methoxy-, trihydrochloride, monohydrate	87
6555	-----, 6-chloro-9-[ $\beta$ -[2-(diethylamino)ethyl]phenethylamino]-2-methoxy-, dihydrochloride	98
6644	-----, 6-chloro-9-[ $\alpha$ -[3-(diethylamino)propyl]phenethylamino]-2-methoxy-, dihydrochloride, trihydrate	95
6560	-----, 6-chloro-9-[ $\beta$ -[2-(dimethylamino)ethyl]phenethylamino]-2-methoxy-, dihydrochloride	98
7226	9-Acidone, 3-chloro-7-methoxy-	88
	Ammonium compounds.	-10
5545	hexadecyl[2-[ (p-methoxybenzyl)-2-pyrimidinyl-amino]ethyl]dimethyl----- bromide	82
4935	$\alpha$ -Anisidineethanol, $\alpha$ -chloromethyl-	67
7224	Anthranilic acid, 4-chloro-N-(p-methoxyphenyl)-	69
6558	Benzyl alcohol, $\alpha$ -(benzylethylaminomethyl)-3-chloro-1'-ethoxy-, hydrochloride	92
6557	-----, 3-chloro-4-ethoxy- $\alpha$ -(phenethylaminomethyl)-, hydrochloride	66
3675	Crotonic acid, $\alpha$ -anilino- $\beta$ -chloro- $\gamma$ -hydroxy- $\gamma$ -methoxy-, $\gamma$ -lactone	34
6094	Ethanol, 2-[N-(3-chloroallyl)-5-chloro-3-methoxyanilino]-	
6298	Hydracrylic acid, 2-bromo-3-(3,4-dimethoxyphenyl)-, methyl ester	9
5936	Lactic acid, m-chlorocarbanilate-, 2-(2,4-dichlorophenoxy)ethyl ester	74
5997	-----, m-methylcarbanilate, 2-(2,4-dichlorophenoxy)-ethyl ester	48
2800	2-Naphthamide, 1,2,3,4-tetrahydro-6-hydroxy-4-(4-hydroxy-3-methoxyphenyl)-3-hydroxymethyl-7-methoxy-, from $\alpha$ -conidendrin	18
5678	Phosphonic acid, (2,2,3-trichloro-1-hydroxybutyl)-, bis[2-(2-thiocyanatoethoxy)ethyl] ester	84
5679	-----, (2,2,2-trichloro-1-hydroxyethyl)-, bis[2-(2-thiocyanatoethoxy)ethyl] ester	84
5293	Propionitrile, 3-(2-hydroxyethoxy)-, m-chlorocarbanilate	63
5233	Propiophenone, 3-chloro-4'-hydroxy-3'-methoxy-	77

TABLE I

Code No.	Classification and Name	K Value
ETHERS		
Polysubstituted		
6309	Protocatechuyl alcohol, $\alpha$ -[1-( <i>p</i> -methoxyphenyl)-2-propylaminomethyl]-, hydrochloride	89
5908	Pyruvic acid, (4-hydroxy-3-methoxyphenyl)-, oxime	27
5528	-----, (4-hydroxy-3-methoxyphenyl)-2-thio-	71
6067	Quinocrine, salt with 1 f. wt. sulfamic acid	82
3721	Quinoline, 5-bromo-6-methoxy-8-nitro-	-7
6320	4-Quinolinemethanol, 3-( <i>p</i> -chlorophenyl)- $\alpha$ -(diethylaminomethyl)-6-methoxy-	75
6540	-----, $\alpha$ -(3-dibutylaminopropyl)-6-methoxy-, hydrochloride	93
Quinolinium compounds.		
6069	4-chloro-2-[ <i>p</i> -(dimethylamino)phenyliminomethyl]-5-methoxy-1-methyl----- chloride	89
6068	Sulfanil- <i>p</i> -anisidide, N <sup>4</sup> -(1-sulfoethyl)-2'--(1-sulfoethylamino)-, disodium salt, tetrahydrate	24
GUANIDINES		
Unsubstituted		
2716	Guanidine, salt with 1 f. wt. fluosilicic acid	74
3652	-----, 1,3-diphenyl-, salt with pentachlorophenol	90
7082	-----, 1,3-di- <i>o</i> -tolyl-	97
4555	-----, 1,1'-(methylenedi- <i>p</i> -phenylene)di-, sulfate	98
4550*	-----, octadecyl-, hydrogensulfate	96
4551*	-----, tetradecyl-, hydrogensulfate	92
7081	-----, triphenyl-	96
Substituted		
5015	Acetamide, N-(cyanoamidino)-	67
6698	Benzimidazole, 1-acetyl-2-amino-, hydrochloride	56
6632	Guanidine, (2-benzimidazolyl)-	100
2989	-----, 1,3-dicyano-, potassium salt	36
5192	-----, 1 <i>H</i> -tetrazol-5-yl-	93
4544	Isonicotinamide, N-(3-guanylguanidino)-	90
HALIDES		
Unsubstituted		
Bromides		
4211	Benzene, <i>p</i> -dibromo-	47
2825	-----, (1,2-dibromoethyl)-	92
3369	-----, 1,2,4-tribromo-	83
3332	-----, 1,3,5-tribromo-	-19

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Unsubstituted		
	Bromides	
4155	Biphenyl, 3-bromo-	88
6023	-----, 4-bromo-	83
2826, 4205	-----, 4,4'-dibromo-	-10, -8
4142, 4209	Butane, 1,2,3,4-tetrabromo-	<u>92</u> , <u>94</u>
6024	Cyclohexane, 1,2,3,4,5,6-hexabromo-	25
4201	Ethane, 1,1,2,2-tetrabromo-	94
4214	Methane, bromodiphenyl-	94
3392	Pentane, 1,2,3,4-tetrabromo-	-117
	Chlorides	
5522	Anthracene, 2-chloro-	41
3393	Benzene, 2,4-bis(chloromethyl)-1,3,5-trimethyl-	85
3208	-----, 2,5-dichloro-1-(1-chloroethyl)-	86
4190	-----, (1,2-dichloroethyl)-	75
3561	-----, hexachloro-	3
3371	-----, pentachloroethyl-	-46
4341	-----, 1,3,5-trichloro-	61
3182	Biphenyl, 4-chloro-	98
3471	Cumene, 2,5-dichloro-	50
4266	Cyclohexane, 1,2,3,4,5,6-hexachloro-, 6-isomer	99
4098	Cyclopentadiene-, 1,2,3,4,5-pentachloro-5-tri- chloromethyl-	
4130	Ethane, 1,2-dichloro-1,1,2,2-tetraphenyl-	76
3838	-----, perchloro-	-4
6022	Ethylene, 2,2-bis(p-chlorophenyl)-1,1-dichloro-	53
5490	Hexane, 2,5-dichloro-2,5-dimethyl-	14
5350	Methane, (4-biphenylyl)chlorodiphenyl-	59
5349, 5919	Naphthalene, 2-(chloromethyl)-	<u>97</u> , <u>99</u>
	Fluorides	
3466	Biphenyl, 4,4'-difluoro-	80
	Iodides	
3122	Benzene, iodoso-	91
3121	-----, iodoxy-	87
4156	Biphenyl, 2-iodo-	90
	Mixed	
3370	Benzene, 1,3,5-trichloro-2-iodo-	83
2971	Ethane, 2,2-bis(p-fluorophenyl)-1,1,1-trichloro-	<u>85</u>

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Monosubstituted		
Acid Anhydrides		
5941	Bicyclo[2.2.1]hept-5-ene-2-acetic acid, 2-carboxy-1,4,5,6,7,7-hexachloro-, cyclic anhydride	46
5339	Cyclohexane-1,2-dicarboxylic anhydride, 4,5-dichloro-3,6-endoxy-	48
3745, 4013 5304	Phthalic anhydride, tetrachloro-	60, 7L 84
Acids		
3997	Acetic acid, p-chlorophenyl-	34
5437	Acrylic acid, $\alpha,\beta$ -dichloro-	28
3572	-----, perchloro-, sodium salt	77
3990	Adipic acid, perfluoro-	-10
2847	1-Apobornaneacetic acid, 2-chloro-	14
3620	Benzoic acid, o-chloro-, bismuth(III) salt	-44
3621	copper(II) salt	43
3080	nickel(II) salt	15
3081	-----, p-chloro-, nickel(II) salt	38
3292	-----, 3,4-dichloro-, nickel(II) salt	52
3313	Crotonic acid, $\gamma,\beta$ -dichloro- $\alpha,\beta$ -diphenyl-	92
3604	Hydrocinnamic acid, $\alpha,\beta$ -dibromo-	55
3409	$\gamma$ -Isodurylic acid, 3-bromo-	62
5839	Maleic acid, dichloro-	30
4933	Phthalic acid, 4-chloro-	69
4001	-----, perchloro-	68
3988	Succinic acid, perfluoro-	9
Alcohols		
3083	9,10-Anthracenediol, 1-chloro-9,10-dihydro-9,10-diphenyl-	42
3084	-----, 2-chloro-9,10-dihydro-9,10-diphenyl-	1,8
2646	1-Apobornaneethanol, 2-chloro-	60
5231	Benzyl alcohol, 2,4-dichloro-	63
5232	-----, 3,4-dichloro-	57
5939	1-Heptanol, 2,2,3,3,4,4,5,5,6,6,7,7-dodeca-fluoro-	27
5240	1-Nonanol, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-hexadecafluoro-	72
5728	1-Pentanol, 2,2,3,3,4,4,5,5-octafluoro-	1
7161	1-Pentyn-3-ol, 1-chloro-2-ethyl-	66
5242	1-Propanol, 2,2,3,3-tetrafluoro-	21

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Monosubstituted		
Alcohols		
5009	2-Propanol, 1,1,1,3,3,3-hexachloro-	92
3340	-----, 1-iodomercuri-	97
3085	-----, 1,1,1-tribromo-2-methyl-	69
5237	2-Propyn-1-ol, 1,1-bis(p-chlorophenyl)-	91
Amides		
6090	Acetamide, N-allyl-2-chloro-	87
7041	-----, 2-bromo-N-sec-butyl-	99
7178	-----, 2-bromo-N-cyclohexyl-	99
5819	-----, N-tert-butyl-, hydrogeniodide, compound with $\frac{1}{2}$ f. wt. iodine	99
3485	-----, 2-chloro-	70
4930	-----, 2-chloro-N-hexadecyl-	72
6132	Acetanilide, 2'-acetamido-4'-chloro-	75
7063	-----, 2'-bromo-	66
3099	-----, 2-chloro-	89
7049	-----, 2'-chloro-	94
7064	-----, 4'-chloro-	87
7051	-----, 2,2-dichloro-	94
5048	-----, 2',5'-dichloro-	71
5049	-----, 2',5'-dichlorodi-	76
6020	-----, 4'-iodo-	80
7053	-----, 2,2,2-trichloro-	96
7181	Aceto-o-toluidide, 2-bromo-	92
5326	Acrylamide, N-(m-chlorophenyl)-	67
5842	-----, 2,2-dichloro-N-(m-chlorophenyl)-	95
4778	Benzamide, N-benzyl-o-chloro-	89
4772	-----, N-benzyl-p-chloro..	34
4437	-----, N-benzyl-2,4-dichloro-	48
4443	-----, N-sec-butyl-o-chloro-	93
4775	-----, o-chloro-N-cyclohexyl-	80
4776	-----, p-chloro-N-cyclohexyl	80
4781	-----, p-chloro-N,N-dipropyl-	98
4454	-----, p-chloro-N-(1-methylpentyl)-	25
4444	-----, o-chloro-N-pentyl-	89
4780	-----, p-chloro-N-2(or 3?)-pentyl-	90
4436	-----, 2,4-dichloro-N-cyclohexyl-	71
4902	-----, 2,4-dichloro-N-isobutyl-	86
4711	-----, 2,4-dichloro-N-(1-methylbutyl)-	87
4452	-----, 2,4-dichloro-N-pentyl-	90
4445	Panznilide, 1'-bromo-2-chloro-	85
4456	-----, 2'-bromo-2,4-dichloro-	35

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Monosubstituted		
Amides		
4429	Benzanilide, 4'-bromo-2,4-dichloro-	56
4430	-----, 4'-bromo-3,4-dichloro-	41
6428	-----, 2'-chloro-	39
6429	-----, 3'-chloro-	12
4449	-----, 4-chloro-	52
6430	-----, 4'-chloro-	6
4447	-----, 2,2'-dichloro-	75
4448	-----, 2,3'-dichloro-	59
4457	-----, 2,4'-dichloro-	93
4773	-----, 2',4-dichloro-	21
6431	-----, 2',5'-dichloro-	24
4774	-----, 3',4-dichloro-	38
4458	-----, 2,4-dichloro-2'-phenyl-	33
4428	-----, 2,2',4,5'-tetrachloro-	30
4455	-----, 2',3,4,5'-tetrachloro-	32
4905	-----, 2,2',4-trichloro-	36
4906	-----, 2,3',4-trichloro-	17
4432	-----, 2',3,4-trichloro-	28
4907	-----, 2,4,4'-trichloro-	35
4433	-----, 2,4,5'-trichloro-	72
4434	-----, 3,3',4-trichloro-	64
4450	m-Benzotoluidide, 2-chloro-	72
4451	o-Benzotoluidide, 2-chloro-	20
4452	p-Benzotoluidide, 2-chloro-	57
4440	o-Benzotoluidide, 4-chloro-	40
4441	p-Benzotoluidide, 4-chloro-	13
4908	m-Benzotoluidide, 2,4-dichloro-	26
4910	p-Benzotoluidide, 2,4-dichloro-	36
4909	m-Benzotoluidide, 3,4-dichloro-	67
6153	Butyranilide, 4'-bromo-	60
5066	-----, 2'-chloro-	35
5065	-----, 3'-chloro-	30
5067	-----, 4'-chloro-	75
5441	-----, 3'-chloro-perfluoro-	72
5347	-----, 3'-chloro-2,2,3-trichloro-	61
5070	-----, 2',5'-dichloro-	39
6178	Formanilide, 2'-chloro-	44
6180	-----, 3'-chloro-	46
6181	-----, 4'-chloro-	57
5763	-----, 2',4'-dichloro-	71
6182	-----, 2',5'-dichloro-	71

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Monosubstituted		
Amides		
5848	Isobutyranilide, 3'-chloro-	67
5748	-----, 4'-chloro-	(T)
5758	-----, 2',4'-dichloro-	61
7126	Oxanilide, 3,3'-dichloro-	32
5963	Phthalamide, N,N'-bis(o-chlorophenyl)-	95
6689	Propionamide, 3-chloro-N-methyl-	67
7179	Propionanilide, 2'-bromo-	96
6106	-----, 4'-bromo-	85
5054	-----, 2'-chloro-	63
3100, 5055	-----, 3'-chloro-	77, 62
5053	-----, 4'-chloro-	92
4686, 5056	-----, 2',5'-dichloro-	47, 58
6110	o-Propionotoluidide, 5'-chloro-	57
Amines		
4808	Aniline, N-allyl-o-chloro-	80
2916	-----, 3,5-bis(trifluoromethyl)-	60
5861	-----, m-chloro-	96
4312*	-----, 4,4'-(p-chlorobenzylidene)bis[N,N-dimethyl-	97
4233	-----, 2,4,6-tribromo-	89
4243	Benzidine, 3,3'-dichloro-, dihydrochloride	93
6290	1,3-Butanediamine, N <sub>3</sub> -(p-chlorophenyl)-N <sup>1</sup> -isopropyl-, monohydrobromide	95
6513	Dibenzylamine, 4-bromo-N-cyclohexyl-	57
3128	Ethylamine, 2-bromo-, hydrochloride	100
3982	Hexylamine, 6-bromo-N,N-diethyl-, hydrochloride	41
4745	2,4-Xyldine, 1 <sup>4</sup> -(o-chlorophenyl)-N-ethyl-1 <sup>4</sup> -(4-ethylamino-3-methyl-2,5-cyclohexadienylidene)-, monohydrochloride	100
Carbamates		
5290	Allyl alcohol, 1-(chloromethyl)-, m-chlorocarbanilate	93
5257	4,4'-Bicarbanilic acid, 3,3'-dichloro-, diisopropyl ester	-15
5917	2-Butanol, 3-methyl-, m-chlorocarbanilate	74
5292	-----, 1,3,4-trichloro-, carbanilate	69
5467	2-Butenol, 3-chloro-, carbanilate	59
4493	Carbamic acid, 2-chloroethyl ester	92
6258	2-fluoroethyl ester	(T)
5479	-----, dimethyl-, p-chlorophenyl ester	95
5476	-----, ethyl-, p-chlorophenyl ester	61

TABLE I

Code No.

### Classification and Name

27-11

## HALIDES

### Homonuclear Substituted

## Carbamates

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Monosubstituted		
Carbonates		
6805	Carbonic acid, cyclic chloromethylethylene ester	71
6807	cyclic 1,2-dichloroethylene ester	77
3344	-----, isopropyl 2,4-dichlorophenyl ester	73
3341	pentachlorophenyl ester	40
3342	x,x,x,x-tetrachlorophenyl ester	32
3343	?4,5-trichlorophenyl ester	32
3345, 5439	-----, methyl 2,4,5-trichlorophenyl ester	70, 84
Esters		
4108	Acetic acid, chloro-, pentachlorophenyl ester	85
5509	Acrylic acid, 2-chloro-3-hydroxy-, benzoate, ethyl ester	42
4821	Adipic acid, bis(x-chloroallyl) ester	31
2850	1-Apocamphaneethanol, 2-chloro-, acetate	57
5203	Benzoic acid, p-bromophenyl ester	100
5207	-----, o-chloro, cyclohexyl ester	72
5206	Benzyl alcohol, 3,4-dichloro-, hexanoate	66
2036	Fumaric acid, bis(2-chloroethyl) ester	7
3111	Maleic acid, chloro-, bis(2-chloroethyl) ester	30
5138	-----, dichloro-, diallyl ester	33
3220	Phthalic acid, tetrachloro-, diethyl ester	35
5208	10-Undecenoic acid, 2-chloroethyl ester	27
Ethers		
3027	Anisole, 2,3,4,5,6-pentachloro-	17
4868	-----, 2,4,5-trichloro-	11
3102	Ethane, 1-(2-biphenyloxy)-2-(2-chloroethoxy)-	11
4753	-----, 2,2-bis(3,5-dichloro-2-methoxyphenyl)- 1,1,1-trichloro-	11
2076	-----, 2,2-bis(p-ethoxyphenyl)-1,1,1-trichloro-	11
3104	Ether, benzyl 2-chloroethyl	11
3105	-----, bis(2-bromoethyl)	11
2846, 4207	-----, bis(p-bromophenyl)	11
3171	-----, butyl 2,3,5,6-tetrachlorophenyl	11
4111	Methane, bis(p-chlorophenoxy)-	11
3107	Naphthalene, 2-(2-chloroethoxy)-	11
2841, 4211	Phenetole, -chloro-	11
3108	-----, p-chloro-	11
3109	-----, -chloro-p-phenyl-	65
Heterocyclic Compounds		
3110	2,3,4,5-tetrachlorotriazine, 4-ether - 1- Kyniro-	11

TABLE I

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Code No.	Classification and Name	K Value
HALIDES		
Monosubstituted		
Heterocyclic Compounds		
3238	Carbazole, 3-chloro-	72
3237	-----, 3,6-dichloro-	64
2992	Cyanuric chloride	63
3535	Dibenzothiophene, 2-chloro-	58
3748	-----, x-chloro-	96
3536	crude	91
5385	m-Dioxane, 2-(p-chlorophenyl)-4-methyl-	90
5382	1,3-Dioxolane, 2-(o-chlorophenyl)-4,5-dimethyl-	74
5372	-----, 2-(o-chlorophenyl)-4-methyl-	74
5371	-----, 2-(p-chlorophenyl)-4-methyl-	65
3989	Oxepane, dodecafluoro-	-47
3991	Oxonane, hexadecafluoro-	-119
3097	Pyridine, 2-bromo-	69
3098	-----, 3-bromo-	54
7171	-----, 2-(p-chlorostyryl)-	92
7172	-----, 4-(p-chlorostyryl)-	92
4150	Quinoline, 1,5-dichloro-	90
6256	2-Stilbazole, 2',4'-dichloro-	88
3234	2,4,8,10-Tetraoxaspiro[5.5]undecane, 3,9-bis(tri-chloromethyl)-	9
4380	1,3,5,7-Tetroxocane, 2,6-bis(trichloromethyl)-	46
3800	Thianaphthene, 3-chloro-	86
3801	-----, 2,3-dichloro-	86
3563	-----, 2,3(?) -dichloro-	92
3803	-----, 2,3,x,x,x-pentachloro-	3
3802	-----, 2,3,x,x-tetrachloro-	58
3054	Thiophene, 2,5-dibromo-	54
3841	-----, 2-(1,2-dibromoethyl)-5-chloro-	86
Hydroxylamine Derivatives		
6268	Acetone, O-(p-chlorophenylcarbamoyl)oxime	81
6322	-----, O-(2,5-dichlorophenylcarbamoyl)oxime	31
4234	Acetophenone, p-chloro-, oxime	83
4472	Benzaldehyde, 3,4-dichloro-, O-(3,4-dichlorobenzyl)oxime	52
Imides		
5845	Bicyclo[2.2.1]hept-5-ene-2,3-dicarboximide, 1,4,5,6,7,7-hexachloro-N-ethyl-	74
2934	Bicyclo[2.2.1]hept-2-ene-5,6-dicarboximide, 1,2,3,4,7,7-hexachloro-N-pentyl-	-65

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Monosubstituted		
	Imides	
5823	Maleimide, <u>N</u> -allyl-2,3-dichloro-	100
5833	-----, <u>N</u> -benzyl-2,3-dichloro-	55
3808	-----, <u>N</u> -( <u>m</u> -chlorophenyl)-	73
3807	-----, <u>N</u> -( <u>o</u> -chlorophenyl)-	80
3809	-----, <u>N</u> -( <u>p</u> -chlorophenyl)-	84
5835	-----, 2,3-dichloro- <u>N</u> -cyclohexyl-	56
5829	-----, 2,3-dichloro- <u>N</u> -decyl-	89
5825	-----, 2,3-dichloro- <u>N</u> -ethyl-	100
5831	-----, 2,3-dichloro- <u>N</u> -(2-ethylhexyl)-	92
5828	-----, 2,3-dichloro- <u>N</u> -hexyl-	98
5827	-----, 2,3-dichloro- <u>N</u> -isobutyl-	100
5824	-----, 2,3-dichloro- <u>N</u> -methyl-	100
5834	-----, 2,3-dichloro- <u>N</u> -phenethyl-	33
5453	-----, 2,3-dichloro- <u>N</u> -phenyl-	21
5826	-----, 2,3-dichloro- <u>N</u> -propyl-	28
5837	-----, 2,3-dichloro- <u>N</u> -( <u>m</u> -tolyl)-	19
5836	-----, 2,3-dichloro- <u>N</u> -( <u>o</u> -tolyl)-	77
5838	-----, 2,3-dichloro- <u>N</u> -( <u>p</u> -tolyl)-	51
5687	Phthalimide, <u>N</u> -[bis( <u>p</u> -chlorophenyl)methyl]-	65
5338, 5975	-----, <u>N</u> -(2-bromoethyl)-	59, 84
7058	-----, <u>x</u> -(2-bromoethyl)-	93
3722	-----, <u>N</u> -(3-bromopropyl)-	70
4412	-----, <u>N</u> -( <u>m</u> -chlorophenyl)-	26
5686	-----, tetrachloro-	95
6345	Pyromellitic acid, diimide, <u>N,N'</u> -bis( <u>m</u> -chlorophenyl)-	-43
6344	-----, diimide, <u>N,N'</u> -bis( <u>o</u> -chlorophenyl)-	-102
6346	-----, diimide, <u>N,N'</u> -bis( <u>p</u> -chlorophenyl)-	-12
6350	-----, diimide, <u>N,N'</u> -bis(3-chloro-2-tolyl)-	-61
7087	Succinimide, 2-chloro-3-( <u>x</u> -chlorophenyl)- <u>N</u> -phenyl-	58
3226	-----, 2-chloro- <u>N</u> -phenyl-	86
	Iodonium Compounds	
	Iodonium compounds.	
2861	bis(2-bromo-4-chlorophenyl)----- chloride	88
2862	----- iodide	71
2863	----- sulfate	86
2870	bis( <u>p</u> -bromophenyl)----- chloride	73
2871	----- iodide	65
2872	----- sulfate	73
2864	bis(2,4-dichlorophenyl)----- chloride	67
2865	----- iodide	70
2866	----- sulfate	73

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Monosubstituted		
Iodonium Compounds		
Iodonium compounds.		
2867	bis(3,4-dichlorophenyl)----- chloride	85
2868	bis(3,4-dichlorophenyl)----- iodide	94
2869	bis(3,4-dichlorophenyl)----- sulfate	100
2873	bis(p-fluorophenyl)----- chloride	100
2874	bis(p-fluorophenyl)----- iodide	(T)
Ketones		
7098	Acetophenone, 2,2,4'-trichloro-	73
7124	-----, m-trichloromethyl-	68
2845, 4219	Benzophenone, 4-chloro-	91, 77
4203	Camphor, $\alpha$ -bromo-	67
4173	Chalcone, 4-chloro-	30
2843	2,5-Cyclohexadien-1-one, hexachloro-	(T)
4177	2-Cyclohexen-1-one, 3-(m-chlorophenyl)-	63
4888, 4948	-----, 2,3,4,4,5,6,6-heptachloro-	84, 97
4378	1,3-Indanedione, 2-chloro-2-isovaleryl-	47
4377	-----, x,x-dichloro-2-propionyl-	53
3793, 4111	4,7-Methanoindene-1,8-dione, 2,3,3a,4,5,6,7,7a-octachloro-3a,4,7,7a-tetrahydro-	72, 64
6010	Propiophenone, 4'-chloro-	56
Lactones		
3770	1,3-Benzodioxan-4-one, 6-bromo-2-methyl-	87
3826	-----, 6-chloro-2,8-dimethyl-	88
3752	-----, 6-chloro-2-methyl-	78
3228	-----, 2-(o-chlorophenyl)-	54
3823	-----, 2-(2,6-dichlorophenyl)-	32
6815	2-Biphenylcarboxylic acid, 5'-chloro-2'-hydroxy-, $\delta$ -lactone	95
3622	Crotonic acid, 2,3-dichloro-4-hydroxy-4-phenyl-, $\gamma$ -lactone	24
Nicotine Derivatives		
Nicotinium compounds.		
2776	bis(3,4-dichlorobenzyl)----- dichloride	75
Pyrrolidinium compounds.		
2747	1-(o-chlorobenzyl)-1-methyl-2-(3-pyridyl)----- thiocyanate	93
2745	1-(2,4-dichlorobenzyl)-1-methyl-2-(3-pyridyl)----- chloride	90
2746	1-(3,4-dichlorobenzyl)-1-methyl-2-(3-pyridyl)----- chloride	80

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Monosubstituted		
Nitriles		
4851	Acetonitrile, 2,4,6-trichlorophenyl-	96
7096	Cinnamonnitrile, o-chloro-a-phenyl-	87
3214	Fumaronitrile, chloro-	91
5750	Malononitrile, o-chlorobenzylidene-	91
5765	-----, p-chlorobenzylidene-	(T)
3101	Propionitrile, 3-bromo-	43
5086	-----, 2-chloro-	45
3109	-----, 3-chloro-	46
5100	-----, 2,2,3-trichloro-	45
Nitro Compounds		
4024	Benzene, 1,2-dichloro-4,5-dinitro-	99
6996	-----, 1,3-dichloro-4,6-dinitro-	98
3391	-----, 1,4-dichloro-2-nitro-	84
5193	-----, pentachloronitro-	71
5194	-----, 1,2,3,4-tetrachloro-5-nitro-	81
4876, 7111	-----, 1,2,4,5-tetracylolo-3-nitro-	79, 85
5551	-----, 1,2,4-trichloro-3,5-dinitro-	75
3064	Biphenyl, x-chloro-2-nitro-	90
6267	Butane, 1-(p-chlorophenyl)-1-(3,4-dichlorophenyl)-2-nitro-	48
4034	1-Butene, 1-(o-chlorophenyl)-2-nitro-	100
4040	-----, 1-(p-chlorophenyl)-2-nitro-	80
4086	-----, 1-(2,4-dichlorophenyl)-2-nitro-	94
4087	-----, 1-(3,4-dichlorophenyl)-2-nitro-	76
6266	Cyclohexane, 1,2-dibromo-4-nitro-5-phenyl-	26
5557	Stilbene, 2'-chloro-2,4,6-trinitro-	-26
4090	Styrene, β-bromo-β-nitro-	91
3813, 7152	-----, 2-chloro-β,4-dinitro-	89, 93
3811	-----, o-chloro-β-nitro-	98
3812	-----, p-chloro-β-nitro-	81
3814, 7153	-----, 2,4-dichloro-β-nitro-	70, 83
3815	-----, 3,4-dichloro-β-nitro-	81
Phenols		
3526	x,x-Biphenol, octachloro-	94
7146*	Catechol, tetrachloro-	96
3605	p-Cresol, 2,6-dibromo-	80
3619	o-Cresol, 4,6-diiodo-	31
3571, 7277*	Hydroquinone, tetracylolo-	80, 83
4132	2-Naphthol, 1,6-dibromo-	91
5196	x <sub>n</sub> -Phenanthrenopolyol, x <sub>n</sub> -polychloro-	29

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Monosubstituted		
Phenols		
4193	Phenol, 2-bromo-4-phenyl-	79
4870	-----, 2(and 4)-2-but enyl-4(and 2), 6-dichloro-	80
4543	-----, x-butyl-x,x,x,x-tetrachloro-	97
4262	-----, 2-chloro-4-cyclohexyl-	84
4263	-----, 4-chloro-2-cyclohexyl-	97
3165	-----, 4-chloro-2-( $\alpha$ -methylbenzyl)-	91
2938	-----, 4-chloro-2-phenyl-	98
2937	-----, x-chloro-2-phenyl-	99
2936	-----, x-chloro-4-phenyl-	85
4661	-----, 4,4'-cyclohexylidenebis[2,6-dichloro-	83
2977	-----, 2,4-dichloro-	76
2939	-----, 2,4-dichloro-6-phenyl-	86
4145	-----, 4,4'-isopropylidenebis[2-chloro-	87
7092	-----, 4,4'-isopropylidenebis[2,6-dichloro-	32
3055	-----, 2,2'-methylenebis[4,6-dichloro-	86
4381	-----, 3,3'-methylenebis[2,4,6-trichloro-	51
3385, 1206	-----, pentabromo-	88, 95
4509	-----, pentachloro-, diamminecopper(II) derivative	66
4510	rosinamminecopper(II) derivative	87
3500	zinc derivative	91
4869	-----, 2,3,5,6-tetrachloro-	94
4212	-----, 2,4,6-tribromo-	58
4657	-----, 2,2'-(2,2,2-trichloroethylidene)bis[6-bromo-4-chloro-	90
4382	-----, 2,2'-(2,2,2-trichloroethylidene)bis[4,6-di-chloro-	98
6471	Pyrocatechol, 4-chloro-	79
3882	Thymol, 6-chloro-	76
3407	3,5-Xylenol, 4-bromo-	74
6392	2,6-Xylenol, 4-chloro-	61
6395	3,5-Xylenol, 2,2'-methylenebis[4,6-dichloro-	25
Phosphorus Compounds		
3760	Phosphine oxide, tris(o-chlorophenyl)-	-10
3090	Phosphoric acid, bis(o-chlorophenyl)phenyl ester	93
3091	-----, o-chlorophenyldiphenyl ester	92
4187	-----, tris(o-chlorophenyl) ester	91
4110	-----, tris(2,3-dibromopropyl) ester	95
3946	-----, tris(pentachlorophenyl) ester	100
2878	Phosphorous acid, 2,4-dichlorobenzyl diethyl ester	85
4885	$\alpha$ -Toluenephosphonic acid, 2,4-dichloro-diethyl ester	78
4887		67

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Monosubstituted		
4886	Phosphorus Compounds	
2879	$\alpha$ -Toluenephosphonic acid, 3,4-dichloro-diethyl ester	74 74
Quinones		
3910	Anthraquinone, 2-chloro-	18
3630	p-Benzoquinone, 2,6-dichloro-	67
3438	-----, tetrabromo-	17
7285	Chloranil	37
3222	Diphenooquinone, octachloro-	94
Sulfides		
3787	Disulfide, bis(p-chlorophenyl)	0
3297, 7117	Methane, bis(p-chlorophenylthio)-	71, 94
7116	Sulfide, 2-chloroethyl phenyl	98
Sulfones		
4835	Sulfone, bis(p-chlorophenyl)	87
3458	-----, 2-chloroethyl dodecyl	19
3315	-----, 2-chloroethyl phenethyl	100
4809	-----, tert-butyl 2-chloroethyl	97
7073	Thionaphthene, 2-bromo-, 1,1-dioxide	86
7072	-----, 2,3-dibromo-2,3-dihydro-, 1,1-dioxide	92
Sulfonic Acids		
5230	Benzenesulfonic acid, p-chloro-, p-bromophenyl ester	66
5228	-----, p-chlorophenyl ester	71
5229	-----, 2,4-dichlorophenyl ester	28
7253	Phenol, 2,4-dichloro-, benzenesulfonate	74
6836	Sulfonic acid, trichlorovinyl-, x,x,x-trichloroethyl ester	82
Thiocarbamates		
4528	Carbamic acid, o-bromophenyldithio-, ammonium salt	99
3050	-----, diethyldithio-, 2,4,6-trichlorobenzyl ester	96
5138	Carbamoyl chloride, diethylthio-	95
4471	Rhodanine, 5-(3,4-dichlorobenzylidene)-	86
Thiocarbonates		
5170	Carbonic acid, thiol-, S-allyl O-pentachloro-phenyl ester	88
3209	Xanthic acid, ethyl-, 2,4,6-trichlorobenzyl ester	96

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Monosubstituted		
Thiocyanates		
4527	Isothiocyanic acid, <i>x</i> -bromophenyl ester	100
5442*	<i>m</i> -chlorophenyl ester	97
3859	Thiocyanic acid, 2,3,4,5,6-pentachlorocyclohexyl ester	90
Thioureas		
5642*	2-Imidazoline, 2-[ <i>(o</i> -chlorobenzyl)thio]-, hydrochloride	98
5643*	----, 2-[ <i>(p</i> -chlorobenzyl)thio]-, hydrochloride	97
5650	----, 2-[ <i>(2,4</i> -dichlorobenzyl)thio]-, picrate	89
5645	----, 2-[ <i>(3,4</i> -dichlorobenzyl)thio]-, 3,4-dichlorophenylsulfinate	98
5646	fluosilicate	66
5649	picrate	93
5644	thiocyanate	89
5451	Pseudourea, 2-( <i>p</i> -chlorobenzyl)-2-thio-, hydrobromide	95
5623	----, 2-(2,4-dichlorobenzyl)-2-thio-, complex with crotonic acid	100
	complex with 3,5-dichlorophenoxyacetic acid	99
5249	hydrochloride	97
5636	----, 2-(3,4-dichlorobenzyl)-1,1-diphenyl-2-thio-, hydrochloride	60
5622	----, 2-(3,4-dichlorobenzyl)-2-thio-, complex with formic acid	92
5626*	complex with 2-furoic acid	99
5624	complex with heptanoic acid	100
5627*	----, 2-(3,4-dichlorophenyl)-2-thio-, complex with 1,2-ethanebis(thiocarbamic acid)	92
7089	----, 2-pentachlorobenzyl-2-thio-, hydrochloride	98
7095	Urea, 1-( <i>p</i> -chlorophenyl)-3-methyl-2-thio-	100
5486	----, 1-( <i>m</i> -chlorophenyl)-2-thio-	100
Ureas		
5886	Carbanilide, 4,4'-dichloro-	41
3453	Glycoluril, 1,3,4,6-tetrachloro-3a,6a-diphenyl-	64
5888	Hydantoin, 1,3-dibromo-5,5-dimethyl-	68
5885	----, 1,3-dichloro-5,5-dimethyl-	97
5887	Urea, ( <i>p</i> -chlorophenyl)-	80
Miscellaneous		
6255	Aniline, N-(2,4-dichlorobenzylidene)-	42
5881	Benzamidine, <i>p</i> -chloro-, hydrochloride	87
3945	Benzenesulfonic acid, <i>p</i> -chloro-, sodium salt	89
4413	Benzenesulfonotoluidide, 4-bromo-	88

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Monosubstituted		
Miscellaneous		
5213	Benzenethiol, pentachloro-	66
3996	Butyraldehyde, $\alpha,\alpha,\beta$ -trichloro-	40
3668	3(2H)-Pyridazinone, 4,5-dichloro-2-phenyl-	74
7183	Sulfanilamide, $N^4$ -(bromoacetyl)-	38
Disubstituted		
Acid-Amides		
3451	Caproic acid, $\epsilon$ -benzamido- $\alpha$ -bromo-	85
5485	Maleanic acid, 3-chloro-	80
7094	Phthalamic acid, $N$ -(3,4-dichlorophenyl)-	91
Acid-Ethers		
3325	Acetic acid, (4-chloro- $\omega$ -tolyloxy)-	89
3291	-----, (2,4-dichlorophenoxy)-, nickel(II) salt	42
3029	-----, (pentachlorophenoxy)-	97
5010	-----, (2,3,5,6-tetrachlorophenoxy)-	88
4189	Propionic acid, $\alpha$ -( $\omega$ -chlorophenoxy)-	19
Acid-Heterocyclic Compounds		
4965, 5782	2-Furoic acid, 5-bromo-	83, 93
4966, 5783	-----, 5-chloro-	90, 95
7167	-----, 3,4-dichloro-	86
7264	Nicotinic acid, 5-fluoro-	34
Acid-Phenols		
4191, 4322	Salicylic acid, 5-bromo-	93, 90
4463	-----, 5-chloro-	100
4462	-----, 3,5-dichloro-	98
Alcohol-Amides		
5129*	Acetamide, 2-chloro- $N$ -dodecyl- $N$ -(2-hydroxyethyl)-	95
7214	-----, 2-( $p$ -chlorophenyl)- $N$ -(2-hydroxyethyl)-	69
7144*	2-Propanol, 3-benzamido-1,1,1-trichloro-	94
Alcohol-Amines		
5111	Aniline, $\omega$ -chloro- $N,N$ -bis(2-hydroxypropyl)-	83
6559	Benzyl alcohol, $\omega$ -chloro- $\alpha$ -(dioctylaminomethyl)-	91
6672	Ethanol, 2-( $p$ -bromobenzylamino)-, hydrochloride	73
5105	-----, 2-( $m$ -chloroanilino)-	81
5103	-----, 2-( $\omega$ -chloroanilino)-	82
5333	-----, 2,2'-( $m$ -chloroanilino)bis-	65
5120	-----, 2-(2,5-dichloroanilino)-	77

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Disubstituted		
Alcohol-Amines		
6676	1-Naphthalenemethanol, 4-bromo- $\alpha$ -(dodecylamino-methyl)-	42
6669	-----, 4-chloro- $\alpha$ -(2-diethylaminoethyl)-, hydrochloride, hydrate	<u>100</u>
6640	-----, 2-chloro- $\alpha$ -(dihexylaminomethyl)-, hydrochloride	<u>93</u>
6670	-----, 2-chloro- $\alpha$ -(dipentylaminomethyl)-, hydrochloride	<u>96</u>
4813	2-Propanol, 1,1'-o-chloroanilinobis-	<u>94</u>
5334	-----, 1-chloro-3-(N-ethyl- <u>m</u> -toluidino)-	<u>80</u>
Alcohol-Carbamates		
4749	Carbamic acid, 2,2,3-trichloro-1-hydroxybutyl-, butyl ester	<u>92</u>
5474	-----, 2,2,2-trichloro-1-hydroxyethyl-, iso-propyl ester	<u>25</u>
Alcohol-Ethers		
3944	Ethanol, 2-(pentachlorophenoxy)-	<u>94</u>
6441	1,2-Propanediol, 3-(p-chlorophenoxy)-	<u>65</u>
3386	2-Propanol, 1-(p-chlorophenoxy)-	<u>64</u>
Alcohol-Heterocyclic Compounds		
6671	4-Morpholineethanol, $\alpha$ -(p-bromophenyl)-3-ethyl-, hydrochloride	<u>92</u>
4468	2-Pyridineethanol, $\alpha$ -(trichloromethyl)-	<u>97</u>
6318	4-Quinolinemethanol, 8-chloro-2-(p-chlorophenyl)- $\alpha$ -2-piperidyl-	<u>92</u>
Alcohol-Nitro Compounds		
4470	Benzyl alcohol, 3,4-dichloro- $\alpha$ -1-nitroethyl-	87
7261	2-Butanol, 1,1,1-trichloro-3-nitro-	<u>19</u>
7142*, 7143	2-Propanol, 1,1,1-trichloro-3-nitro-	<u>88, 97</u>
Alcohol-Phenols		
7100, 7291*	2,2'-Methylenebis(4-chloro-6-methoxyethylphenol)	66, 75
6248	Saligenin, 5-chloro-	<u>90</u>
Alcohol-Phosphorus Compounds		
4464	$\alpha$ -Toluenephosphonic acid, $\alpha$ -chloro- $\alpha$ -hydroxy-, diethyl ester	<u>85</u>
2980	-----, 2,4-dichloro- $\alpha$ -hydroxy-, diethyl ester	<u>86</u>

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Disubstituted		
Alcohol-Quaternary Nitrogen Compounds		
Ammonium compounds.		
4506	bis(2-hydroxyethyl)(2,4-dichlorobenzyl)hexadecyl----- chloride	97
4507	bis(2-hydroxyethyl)(3,4-dichlorobenzyl)hexadecyl----- chloride	88
4504	bis(2-hydroxyethyl)(2,4-dichlorobenzyl)tetradecyl----- chloride	99
4505	bis(2-hydroxyethyl)(3,4-dichlorobenzyl)tetradecyl----- chloride	99
Imidazolium compounds.		
7005	1(or 3)-(4-chlorobutyl)-x-heptadecen-2-yl-1-(2-hydroxyethyl)-2----- chloride, 60 percent in isopropyl alcohol	97
Alcohol-Ureas		
5891	Urea, 3,3-bis(2-hydroxyethyl)-1-(m-chlorophenyl)-	44
2994	-----, 1,3-bis(2,2,2-trichloro-1-hydroxyethyl)-	37
2993	-----, 1-(2,2,2-trichloro-1-hydroxyethyl)-	36
5890	-----, 3-(2,2,2-trichloro-1-hydroxyethyl)-1-m-tolyl-	62
Amide-Amines		
4939	Acetamide, 2-(m-bromoanilino)-	95
4941	-----, 2-(m-chloroanilino)-	66
Amide-Azo Compounds		
4442	Benzanilide, 4-chloro-4'-phenylazo-	25
4689	-----, 2,4-dichloro-4'-phenylazo-	16
Amide-Esters		
4414	Oxanilic acid, 4'-chloro-, ethyl ester	73
5931	-----, 3'-chloro-, isopropyl ester	35
Amide-Ethers		
3576	Acetamide, 2-(2,4-dichlorophenoxy)-	89
4912	Acetanilide, 3'-chloro-2-(pentachlorophenoxy)-	18
6131	o-Acetanisidine, 5'-chloro-	53
5039	p-Anisanilide, 4'-bromo-	50
4783, 4992	-----, 2'-chloro-	70, 21
4784, 4993	-----, 3'-chloro-	55, 53
4785, 4994	-----, 4'-chloro-	35, 59
4782, 4995	-----, 2',5'-dichloro-	-31, 51
6200	Benzanilide, 2'-bromo-2-ethoxy-	2
6201	-----, 4'-bromo-2-ethoxy-	-8

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Disubstituted		
Amide-Ethers		
6197	Benzanilide, 2'-chloro-2-ethoxy-	-38
6198	-----, 3'-chloro-2-ethoxy-	-44
6199	-----, 4'-chloro-2-ethoxy-	-185
6202	-----, 2',5'-dichloro-2-ethoxy-	72
4438	<u>o</u> -Benzanisidide, 2,4-dichloro-	33
4453	<u>p</u> -Benzanisidide, 2-chloro-	82
4439	-----, 2,4-dichloro-	54
4911	-----, 3,4-dichloro-	15
Amide-Ketones		
2922	Acetoacetanilide, 4'-chloro-	71
5749	-----, 4,4,4-trifluoro-	64
Amide-Nitro Compounds		
4771	Benzanilide, 2-chloro-3'-nitro-	49
4772	-----, 2-chloro-4'-nitro-	46
4415	-----, 3'-chloro-3-nitro-	56
4446	-----, 4-chloro-2'-nitro-	64
4435	-----, 4-chloro-3'-nitro-	42
4747	-----, 4-chloro-4'-nitro-	56
4680	-----, 4'-chloro-4-nitro-	45
4431	-----, 2,4-dichloro-2'-nitro-	53
4904	-----, 2,4-dichloro-3'-nitro-	23
5769	Formanilide, 2'-chloro-4'-nitro-	96
Amide-Phenols		
6501	Salicylamide, N-allyl-5-chloro-	99
6720	-----, N-benzyl-5-chloro-	83
6484	-----, 5-bromo-N,N-dimethyl-3-phenyl-	5
6506	-----, N-butyl-5-chloro-	99
6508	-----, N-sec-butyl-5-chloro-	98
6535, 6714	-----, N-tert-butyl-5-chloro-	99, 95
6534, 6713	-----, 5-chloro-	97, 95
6505	-----, 5-chloro-N-ethyl-	91
6717	-----, 5-chloro-N-heptyl-	96
6716	-----, 5-chloro-N-hexyl-	94
6503	-----, 5-chloro-N-isobutyl-	99
6502	-----, 5-chloro-N-isopropyl-	98
6500	-----, 5-chloro-N-methyl-	97
6718	-----, 5-chloro-N-octyl-	90
6715	-----, 5-chloro-N-pentyl-	93
6509	-----, 5-chloro-N-propyl-	98

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Disubstituted		
Amide-Phenols		
6722	Salicylanilide, 5-chloro-	73
6780	-----, 4',5-dibromo-	75
6723	-----, 2',5-dichloro-	82
6724	-----, 3',5-dichloro-	92
6725	-----, 4',5-dichloro-	88
6726	-----, 2',5,5'-trichloro-	88
6731	Salicylo-m-toluidide, 5-chloro-	79
6730	Salicylo-o-toluidide, 5-chloro-	89
6732	Salicylo-p-toluidide, 5-chloro-	72
Amine-Ethers		
1562	Aniline, 3-chloro-4-(p-chlorophenoxy)-, hydrochloride	96
4681	Triethylamine, 2-pentachlorophenoxy-	96
Amine-Heterocyclic Compounds		
3472	Pyrimidine, 2-amino-4-chloro-6-methyl-	64
6633	Quinoline, 7-bromo-4-[4-(diethylamino)-1-methylbutyl]amino]-, diphosphate	97
5609	s-Triazine, 2,4-bis[(1,1,3,3-tetramethylbutyl)amino]-6-chloro-	-2
5612	-----, 2,6-di(tert-butylamino)-4-chloro-	99
5611	-----, 4-chloro-2,6-di(isopropylamino)-	93
4925	-----, 4,6-diamino-2-chloro-	75
5614	-----, 2,4-diamino-6-chloro-	95
4794	-----, 2,4-dichloro-6-(o-chloroanilino)-	88
5613	-----, 2,6-dichloro-4-(cyclohexylamino)-	76
Amine-Imides		
5265	Phthalimide, N-[(m-bromoanilino)methyl]-	38
6271	-----, 3,4,5,6-tetrachloro-N-[2-(diethylamino)ethyl]-	43
5264	-----, N-[(p-iodoanilino)methyl]-	37
Amine-Ketones		
6677	Acetophenone, 2-[benzyl[(p-diethylamino)benzyl]-amino]-3',4'-dichloro-, dihydrochloride	61
6556	-----, 4'-bromo-2'-(N-methylanilino)-	32
6710	Ketone, 9(or 10)-bromo-3-phenanthryl (diethylamino)methyl	68
6641	Propiophenone, 3-(benzylmethylamino)-4'-chloro-, hydrochloride	88

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Disubstituted		
Amine-Nitriles		
5091	Propionitrile, 3-( <u>m</u> -chloroanilino)-	71
5092	-----, 3-( <u>o</u> -chloroanilino)-	83
Amine-Nitro Compounds		
4139	Aniline, 2-chloro-4-nitro-	86
4140	-----, 4-chloro-2-nitro-	88
3449	<u>m</u> -Toluidine, 2,6-diiodo-4-nitro-	60
Amine-Quaternary Nitrogen Compounds		
Ammonium compounds.		
4743	[4-[ <u>(o</u> -chlorophenyl)[p-(dimethylamino)phenyl]methyl- ene]-2,5-cyclohexadienylidene]dimethyl----- chloride	98
Pseudoindolium compounds.		
4744	2-[4-[ <u>(2</u> -chloroethyl)ethylamino]-2-methylstyryl]- 1,3,3-trimethyl-3H----- chloride	99
4742	2-[ <u>p</u> -[ <u>(2</u> -chloroethyl)methylamino]styryl]-1,3,3- trimethyl-3H----- chloride	87
Amine-Sulfones		
6636	Aniline, 3-chloro-4,4'-sulfonyldi-	81
2920	<u>m</u> -Toluidine, 6-ethylsulfonyl-, $\alpha,\alpha,\alpha$ -trifluoro-	71
Carbamate-Esters		
6044	Carbanilic acid, 5-chloro-2-methyl-, 2-propynyl ester	80
4918	Lactic acid, carbanilate, 2-chloroethyl ester	79
5294	-----, <u>m</u> -chlorocarbanilate, 2-chloroethyl ester	93
5298	cyclohexyl ester	77
Carbamate-Ethers		
4880	Carbanilic acid, 5-chloro-2-methoxy-, isopropyl ester	83
5255	-----, 2-methoxy-5-methyl-, 2-chloroethyl ester	95
4920	Ethanol, 2-(2,4-dichlorophenoxy)-, carbanilate	67
5256	<u>m</u> -chlorocarbanilate	73
6323	2-Propanol, 1-chloro-3-isopropoxy-, carbanilate	78
Carbamate-Nitriles		
4915	Carbanilic acid, <u>m</u> -cyano-, 2-chloroethyl ester	83
6263	Hydracrylonitrile, <u>m</u> -chlorocarbanilate	52
Ester-Ethers		
5201	Benzoic acid, <u>o</u> -ethoxy-, <u>p</u> -chlorophenyl ester	75
6296	Cinnamic acid, $\alpha$ -bromo-3,4-dimethoxy-, methyl ester	51

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Disubstituted		
Ester-Ethers		
3103	Fumaric acid, bis[2-(2-chloroethoxy)ethyl] ester	57
6299	Hydrocinnamic acid, $\alpha$ -bromo- $\beta$ ,3,4-trimethoxy-, methyl ester	24
6297	-----, $\alpha$ , $\beta$ -dibromo-3,4-dimethoxy-, methyl ester	26
3110	Maleic acid, bis[2-(2-chloroethoxy)ethyl] ester	81
3030	1,2-Propanediol, 3-pentachlorophenoxy-, diacetate	83
5207	Propanol, 3-(3-phenoxypropoxy)-, bromoacetate	84
Ester-Heterocyclic Compounds		
6521*	2-Furoic acid, 2-chloroethyl ester	95
7168	-----, 3,4-dichloro-, ethyl ester	78
4846	-----, 2,3,4,5-tetrachlorotetrahydro-, butyl ester	100
6827	2-chloroethyl ester	100
6826	docosyl ester	10
6823	dodecyl ester	99
4859	ethyl ester	97
6824	hexadecyl ester	95
4845	methyl ester	100
6825	octadecyl ester	97
5162, 5386	octyl ester	100
4847	propyl ester	100
5202	Piperonyl alcohol, p-chlorobenzoate	47
Ester-Hydrazines		
4374	Carbazic acid, 2-(2,5-dichlorophenyl)-, isopropyl ester	58
4914	-----, 3-phenyl-, 2-chloroethyl ester	52
5554	-----, 3-(2,4,6-trichlorophenyl)-, isopropyl ester	90
Ester-Ketones		
3088	Acetophenone, 2-bromo-3'-hydroxy-, benzoate	47
3089	-----, 2-bromo-4'-hydroxy-, benzoate	59
Ester-Nitro Compounds		
4903	Benzoic acid, 2,4-dichloro-, o-nitrophenyl ester	18
4460	-----, p-nitro-, p-chlorophenyl ester	23
4878	Phenol, 2,3,5,6-tetrachloro-4-nitro-, acetate	87
Ester-Sulfides		
4753	Acetic acid, chloro-, diester with 4,4'-thiodiphenol	90
5146	-----, pentachlorophenylthio-, methyl ester	80

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Disubstituted		
Ester-Thiocarbamates		
5145	Acetic acid, dibutyldithiocarbamoyl-, p-chlorophenyl ester	72
5144	-----, diethyldithiocarbamoyl-, p-chlorophenyl ester	<u>100</u>
5144	Carbamic acid, dithio-, ethylenebis-S,S'-bis(2-bromoethoxycarbonyl)	83
Ether-Heterocyclic Compounds		
4323	Propane, 3-(2,4,5-trichlorophenoxy)-1,2-epoxy-	82
4176	Pyran, 3-bromo-2-ethoxytetrahydro-	66
4174	-----, 3-bromotetrahydro-2-methoxy-	58
4175	-----, 3,4-dibromo-2-ethoxytetrahydro-	<u>100</u>
Ether-Lactones		
3623	2(5H)-Furanone, 3,4-dichloro-5-dodecyloxy-	82
3632	-----, 5,5'-oxybis[3,4-dichloro-	65
Ether-Nitriles		
5075	Acetonitrile, 2,4-dichlorophenoxy-	<u>100</u>
5080	Propionitrile, 3-(o-chlorophenoxy)-	84
Ether-Nitro Compounds		
4877	Anisole, 2,3,5,6-tetrachloro-4-nitro-	83
4561	Ether, p-bromophenyl 2,4-dinitrophenyl	17
4786	-----, 4-tert-butyl-2-chlorophenyl 2,4-dinitrophenyl	23
4560	-----, p-chlorophenyl 2,4-dinitrophenyl	45
Ether-Thiocyanates		
5676	Butanal, 3-chloro-, bis[2-(2-thiocyanatoethoxy)-ethyl] acetal	87
5667	Phenetole, p-chloro-β-thiocyanato-	<u>100</u>
Ether-Thioureas		
5698	2-Imidazoline, 2-[2-(2-chloroethoxy)ethylthio]-hydrochloride	93
5430		<u>87</u>
Heterocyclic-Hydroxy Derivatives		
4149	4-Quinolinol, 5-chloro-	94
3051	8-Quinolinol, 5,7-dibromo-	15
6776	-----, 5,7-dichloro-, copper(II) derivative	34
3408	3-Thianaphthenol, 6-chloro-4-methyl-	76
Heterocyclic-Nitro Compounds		
4372	1,3-Benzodioxan, 2,4-bis(trichloromethyl)-6-nitro-	63
3236	Carbazole, 3,6-dichloro-1,8-dinitro-	81

TABLE 1

Code No.	Classification and Name	K Value
HALIDES		
Disubstituted		
Heterocyclic-Nitro Compounds		
4082*	Furan, 2-(2-bromo-2-nitrovinyl)-	100
4968	-----, 2-chloro-5-nitro-	<u>94</u>
7151	-----, 5-chloro-2-(2-nitrovinyl)-	100
3983	Pyridine, 2-chloro-5-nitro-	76
Heterocyclic-Sulfonamides		
3964	Morpholine, 4-(p-chlorophenylsulfonyl)-	29
3963	-----, 4-(3,4-dichlorophenylsulfonyl)-	74
Heterocyclic-Thioureas		
5652	2-Imidazoline, 2-[(6-chloro-1,3-benzodioxan-8-yl)-methylthiol]-	76
5651	hydrochloride	<u>89</u>
Hydrazide-Nitro Compounds		
4956	Benzoic acid, p-nitro-, o-chlorobenzylidenehydrazide	55
4959	2,2,2-trichloroethylidenehydrazide	65
Imide-Nitro Compounds		
6047	Phthalimide, N-(2-bromoethyl)-3-nitro-	37
6053	-----, N-(2-bromoethyl)-4-nitro-	82
6057	-----, N-(o-chlorobenzyl)-4-nitro-	100
6058	-----, N-(p-chlorobenzyl)-4-nitro-	<u>87</u>
Imine-Phenols		
4983	Phenol, o-[(o-chlorobenzylidene)amino]-	67
4985	-----, o-[(p-chlorobenzylidene)amino]-	71
Nitro-Phenols		
4489	Phenol, 2-bromo-4-tert-butyl-6-nitro-	86
3390	-----, 2-chloro-4,6-dinitro-	<u>100</u>
4777	-----, 2,2'-(2,2,2-trichloroethylidene)bis[4-chloro-6-nitro-	<u>91</u>
Phenol-Sulfides		
4690	Phenol, 2,2'-thiobis[4-chloro-	95
5434	salt with 1 f. wt. dimethylamine	<u>76</u>
Miscellaneous		
5147	Acetamide, N-butyl-2-(pentachlorophenylthio)-	51
5040	Acetanilide, 2,2,2-trichloro-4'-sulfamoyl-	<u>91</u>
5343	Acrylic acid, 3-(m-chloroanilino)-2-(ethoxycarbonyl)-, ethyl ester	46

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Disubstituted		
Miscellaneous		
3132	Anthranilic acid, 3,5-dichloro-	56
3274	Anthraquinone, 1-benzamido-4-chloro-	7
5410	Benzenesulfonic acid, p-methoxy-, p-chlorophenyl ester	51
2909	Benzoic acid, o-(p-bromobenzoyl)-	76
4883	-----, 2,2'-dithiodi-, bis(2,4-dichlorobenzylidene-hydrazone)	19
4881	-----, o-mercaptop-, 2,4-dichlorobenzylidenehydrazide	10
6620	Benzoin, 4,4'-dichloro-	72
3690, 5458	Benzothiazole, 5-chloro-2-mercaptop-	75, 89
3774	1,3-Benzoxazine, 1-acetyl-2-trichloromethyl-4-oxo-	-50
7047	Butyraldehyde, $\alpha,\alpha,\beta$ -trichloro-, and propionamide	95
7090	Carbamic acid, dimethyldithio-, 2-(2,4-dichlorophenoxy)ethyl ester	73
5659	-----, thio-, 2-[2-(octadecylthio)-2-imidazolin-1-yl]-ethyl-, 3,4-dichlorobenzyl ester, hydrobromide	35
4113	Carbonic acid, 2,4,5-trichlorophenyl ester, diester with diethylene glycol	-42
6262	Cinnamic acid, p-chloro- $\alpha$ -cyano-	60
6673	o-Cresol, 6-bromo-4-tert-butyl- $\alpha$ -(dimethylamino)-	96
4427	-----, 4-chloro- $\alpha$ -morpholino-	60
4379	-----, 3,4,6-trichloro- $\alpha$ -(2,3,5-trichloro-6-methoxyphenyl)-	42
7105	Cyclohexanone, 2-[(p-chlorophenyl)thio]-	97
3691	Ether pentachlorophenyl 2-(phenethylthio)ethyl	83
6743	Fumaramic acid, N-carbamoyl-, 2-chloroethyl ester	65
3631	2(5H)-Furanone, 3,4-dichloro-5-hydroxy-, carbanilate	44
3790	-----, 3,4-dichloro-5-phenacyl-	91
5647	Imidazole, 4,5-dihydro-1-(2-aminoethyl)-2-[(3,4-dichlorobenzyl)thio]-, dihydrochloride	88
5660	2-Imidazoline, 1-[2-(3,4-dichlorobenzenesulfonamido)-ethyl]-2-[(3,4-dichlorobenzyl)thio]-	54
3459	Isocyanuric acid, trichloro-	97
4559	Isonicotinic acid, 2-chloro-, hydrazide	88
5832	Maleimide, N-(2-acetamidoethyl)-2,3-dichloro-	95
5830	-----, 2,3-dichloro-N-(2-methoxyethyl)-	97
5370	Mandelic acid, 2-chloroethyl ester	80
3784, 3909	Mucochloric acid thiosemicarbazone	65, 76
3635	Octadecanophenone, 2'-chlore-, 2,4-dinitrophenyl-hydrazone	68
6711	Phosphonic acid, diimide, N,N'-bis(5-chloro-2-pyrimidinyl)-P-phenyl-	-11
6385		43

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Disubstituted		
Miscellaneous		
2880	Phosphoric acid, 2-(2,4-dichlorophenoxy)ethyl diethyl ester	78
3712	Phthalimide, 1,2,3,6-tetrahydro-, <u>N</u> -trichloromethyl-thio-	57
6043	2-Propanol, 1,1,1-trichloro-3-nitro-, carbanilate	88
3233	Propionitrile, 3-(p-chlorophenylthio)-	97
5234	Propiophenone, 2-bromo-3',4'-dimethoxy-----,	66
3082	2,3-dibromo-4'-chloro-3-(3,4-methylene-dioxyphenyl)-	6
5841	3,6-Pyridazinedione, 4,5-dichloro-1,2-dihydro-	79
5195	2-Pyridinecarbamic acid, 5-chloro-, isopropyl ester	55
6317	Pyridinium compounds. 1-(6-chloro-3-phenylcarbonylmethyl)-----bromide	-36
4260	Salicylaldehyde, 3,5-dichloro-	96
4261	oxime	94
7110	Semicarbazide, 1-(p-chlorobenzoyl)-	18
6668	Sulfanilamide, <u>N</u> -(5-bromo-2-pyrimidinyl)-	80
7104	Sulfide, p-chlorobenzyl 2-thienyl	93
5951	-----, 2-chlorocyclohexyl 2,4-dinitrophenyl	36
3231	Sulfone, p-chlorophenyl cyanomethyl	91
3272	Sulfoxide, 2-chloroethyl 2,4-dinitrophenyl	93
5004	Thiazole, 2-(2,2,2-trichloroacetamido)-	64
5669	Thiocyanic acid, 3-chloro-4-(dimethylamino)phenyl ester	100
3842	Thiophene, 5-chloro-2-(1,2-dithiocyanatoethyl)-	55
5089	p-Toluenesulfonanilide, 3-chloro-N-(2-cyanethyl)-	84
5918	Urea, 1,1-bis(2-hydroxyethyl)-3-( <u>m</u> -chlorophenyl)-, bis( <u>m</u> -chlorocarbanilate)	36
Polysubstituted		
3970	Acetic acid, diethyldithiocarbamoyl-, 2-(pentachlorophenoxy)ethyl ester	97
3965	-----, thiocyanato-, 2-(pentachlorophenoxy)-ethyl ester	85
4119	Acetoacetic acid, 2-(2,2,2-trichloro-1-hydroxyaminoethyl)-, ethyl ester	45
6642	Acetophenone, 2-(benzylmethylamino)-3'-chloro-4'-ethoxy-, hydrochloride	87
2995	-----, 4'-(2,2,2-trichloro-1-hydroxyethyl)amino]-	71
6555	Acridine, 6-chloro-9-[ $\beta$ -(2-(diethylamino)ethyl]phenethylamino] 2-methoxy-, dihydrochloride	95

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Polysubstituted		
6644	Acridine, 6-chloro-9-[ $\alpha$ -[3-(diethylamino)propyl]phenethylamino]-2-methoxy-, dihydrochloride, trihydrate	98
6646	-----, 6-chloro-9-[4-(diethylamino)-1-(4-pyridyl)-butyl]amino]-2-methoxy-, trihydrochloride, monohydrate	98
6560	-----, 6-chloro-9-[ $\beta$ -[2-(dimethylamino)ethyl]phenethylamino]-2-methoxy-, dihydrochloride	88
7226	9-Acridone, 3-chloro-7-methoxy-	-10
4935	<u>o</u> -Anisidineethanol, $\alpha$ -chloromethyl-	67
7224	Anthranilic acid, 4-chloro-N-(p-methoxyphenyl)-	69
3452	Benzoic acid, 6-benzoyl-3-chloro-2-nitro-	84
6558	Benzyl alcohol, $\alpha$ -(benzylethylaminomethyl)-3-chloro-4-ethoxy-, hydrochloride	92
6557	-----, 3-chloro-4-ethoxy- $\alpha$ -(phenethylaminomethyl)-, hydrochloride	66
5432	<u>o</u> -Cresol, 6,6'-thiobis[4-chloro- $\alpha$ -(dimethylamino)-	97
3675	Crotonic acid, $\alpha$ -anilino- $\beta$ -chloro- $\gamma$ -hydroxy- $\gamma$ -methoxy-, $\gamma$ -lactone	34
4752	Ethanol, 1-(4-amino-6-phenyl-s-triazin-2-ylamino)-2,2,2-trichloro- and s-Triazine, 2,4-bis(2,2,2-trichloro-1-hydroxyethylamino)-6-phenyl-	25
6674	-----, 2-(3-bromo-5-tert-butyl-2-hydroxybenzylamino)-	98
6675	-----, 2-(5-tert-butyl-3-chloro-2-hydroxybenzylamino)-	100
6094	-----, 2-[N-(3-chloroallyl)-5-chloro-3-methoxyanilino]-	80
4932	-----, 2-(2-chloro-3,5-dinitrobenzenesulfonamido)-	93
6316	-----, 2-[4-(7-chloro-4-quinolylamino)pentyl]ethyl-amino]-, monosulfate	99
4469	-----, 2,2,2-trichloro-1-salicylamido-	80
5301	Furfuryl alcohol, 5-nitro-, bromoacetate	89
2754	chloroacetate	70
5300	p-chlorobenzoate	30
5302	x-chloropropionate	78
6298	Hydracrylic acid, 2-bromo-3-(3,4-dimethoxyphenyl)-methyl ester	9
5936	Lactic acid, m-chlorocarbanilate-, 2-(2,4-dichlorophenoxy)ethyl ester	74
5997	-----, m-methylcarbanilate-, 2-(2,4-dichlorophenoxy)-ethyl ester	48
3969	Morpholinocarbodithioic acid, ester with 2-(pentachlorophenoxy)ethyl mercaptoacetate	78
5678	Phosphonic acid, (2,2,3-trichloro-1-hydroxybutyl)-, bis[2-(2-thiocyanatoethoxy)ethyl] ester	84
5679	-----, (2,2,2-trichloro-1-hydroxyethyl)-, bis[2-(2-thiocyanatoethoxy)ethyl] ester	84

TABLE I

Code No.	Classification and Name	K Value
HALIDES		
Polysubstituted		
5620	Piperazone, 4-[4,6-bis(chloroamino)- <u>s</u> -triazin-2-yl]-1-chloro-3,3-dimethyl-	92
6667	2-Propanol, 1-(7-chloro-4-quinolylamino)-3-diethylamino-, diphosphate	97
13	Propionitrile, 3-(2-hydroxyethoxy)-, <u>m</u> -chlorocarbanilate	63
5233	Propiophenone, 3-chloro-4'-hydroxy-3'-methoxy-	77
6067	Quinocrine, salt with 1 f. wt. sulfamic acid	82
3721	Quinoline, 5-bromo-6-methoxy-8-nitro-	7
5996	3-Quinoliniccarboxylic acid, 7-chloro-4-hydroxy-----, 8-chloro-4-hydroxy-7-methyl-, ethyl ester	59
3984	4-Quinolinemethanol, 7-chloro-2-( <u>p</u> -chlorophenyl)- <u>a</u> -(diethylaminomethyl)-, hydrochloride	28
6319	-----, 3-( <u>p</u> -chlorophenyl)- <u>a</u> -(diethylaminomethyl)-6-methoxy-	94
6320	Quinolinium compounds.	75
6069	4-chloro-2-[ <u>p</u> -(dimethylamino)phenyliminomethyl]-6-methoxy-1-methyl----- chloride	89
6719	Salicylamide, 5-chloro-N-(2-hydroxyethyl)-	84
6721	-----, 5-chloro-N-(3-hydroxypropyl)-	94
6727	Salicylanilide, 5-chloro-2'-nitro-----, 5-chloro-3'-nitro-----, 5-chloro-4'-nitro-----	95
6728	Salicylic acid, 5-bromo-3-phenyl-, 2-(diisopropylamino)ethyl ester, hydrochloride	97
6729	-----, 5-iodo-3-phenyl-, 2-(diisopropylamino)ethyl ester, hydrochloride	99
6472		71
6487		65
HETERO CYCLIC COMPOUNDS		
Nitrogen		
6543	Acetamide, N-[2-(2-heptadecyl-2-imidazolin-1-yl)-ethyl] -, acetate	57
5648	-----, 2-[(2-imidazolin-2-yl)thio]-, picrate	96
4017	Acetic acid, (3,6-dioxo-2-phenyl-1,2,3,4-tetrahydropyridazin-4-yl)-	5
2935	-----, (1,4-methano-1,2,3,4-tetrahydronaphthalimido)-	67
3655	-----, [(1-piperidyl)carbodithio]-	83
6555	Acridine, 6-chloro-9-[ $\beta$ -[2-(diethylamino)ethyl]phenethylamino]-2-methoxy-, dihydrochloride	95
6644	-----, 6-chloro-9-[ $\alpha$ -[3-(diethylamino)propyl]phenethylamino]-2-methoxy-, dihydrochloride, trihydrate	98

TABLE I

Code No.	Classification and Name	K Value
HETEROCLIC COMPOUNDS		
Nitrogen		
6646	Acridine, 6-chloro-9-[4-(diethylamino)-1-(4-pyridyl)-butyl]amino]-2-methoxy-, trihydrochloride, monohydrate	98
6560	-----, 6-chloro-9-[β-[2-(dimethylamino)ethyl]phenethylamino]-2-methoxy-, dihydrochloride	88
7226	9-Acridone, 3-chloro-7-methoxy-	-10
4827	Acrylamide, N-(phthalimidomethyl)-	61
4015	Allantoin	16
5276	Alloxan	40
5280	Alloxanthin	33
5545	Ammonium compounds. hexadecyl[2-[ (p-methoxybenzyl)-2-pyrimidinyl-amino]ethyl]dimethyl----- bromide	82
6480	Antazoline, salt with methanesulfonic acid	74
5077, 6066	1-Aziridinepropionitrile	61, 42
6631	Barbituric acid, 5-ethyl-1-phenyl-	46
3014	Benzeneearsonic acid, p-(1-piperidylsulfonyl)-	56
2859	Benzenesulfonamide, p-1-pyrrolyl-	51
7198	Benzenesulfonic acid, p-(4,5-dihydro-3-methyl-5-oxopyrazol-1-yl)-	51
3651	Benzimidazole	70
6698	-----, 1-acetyl-2-amino-, hydrochloride	56
7120	-----, 2-(2-benzoylethyl)-	65
7276	-----, 2-benzyl-	69
4059	-----, 2-[(ethoxycarbonyl)thio]-	97
4153	-----, (2-naphthenyl)-	87
1053	2-Benzimidazolethiol, copper(II) derivative	96
4054	zinc derivative	92
3446	11H-Benzo[a]carbazole, potassium salt	80
6697	p-Benzoquinone, 2,5-bis(2-pyridylamino)-	21
4705*	4(3H)-Benzotriazinone	100
7254*	-----, 3-butyl-	95
7254A	-----, 3-phenyl-	67
2737	1H-Benzotriazole, 6-nitro-	86
5844	Bicyclo[2.2.1]hept-5-ene-2,3-dicarboximide, N-ethyl-	79
5851	-----, N-(2-ethylhexyl)-	83
5847	-----, 1,4,5,6,7,7-hexachloro-1-ethyl-	74
2934	-----, 1,2,3,4,7,7-hexachloro-1-pentyl-	-65
5394	-----, N-(p-hydroxyphenyl)-	81
2982	-----, N-pentyl-	78
2855	Butyric acid, 3-indolyl-	63
5979	-----, 4-phthalimido-	83
4238	Caffine, tetrahydro-	96

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Nitrogen		
4926	Caproic acid, ε-amino-, lactam	77
6451	Carbamic acid, dithio-, [2-(2-thioxoimidazolidin-1-yl)-ethyl]-, sodium salt, trihydrate	71
5659	-----, thio-, 2-[2-(octadecylthio)-2-imidazolin-1-yl]-ethyl]-, 3,4-dichlorobenzyl ester, hydrochloride	35
6763	-----, thiol-, maleimidomethyl-, butyl ester	99
3238	Carbazole, 3-chloro-	72
3237	-----, 3,6-dichloro-	64
3236	-----, 3,6-dichloro-1,8-dinitro-	81
3475	-----, 3-nitro-9-nitroso-	41
3476	-----, 9-nitroso-, crude	74
3235	-----, 1,3,6,8-tetranitro-, crude	91
3223	-----, N-vinyl-	97
3782	9-Carbazolylpropionitrile	43
4048	Carbonic acid, trithio-, bis(2-benzimidazoly) ester	86
3781	Carbostyryl, 1-methyl-	86
3229	-----, 4-methyl-	100
3718	Cinchonine, salt with 1 f. wt. mandelic acid	96
3061	Citraconimide	98
2952	-----, N-phenyl-	94
2954	-----, N-p-tolyl-	97
2992	Cyanuric chloride	63
5542	1H-Cyclopenta[b]quinoxaline-1,3-dicarboxylic acid, 2,3-dihydro-, diethyl ester	42
5328	Decanediamide, N,N'-diethylene-	-12
4245	1,4-Diazaspiro[4.5]deca-1,3-diene, 2,3-diphenyl-	88
6270	Dibenzo[f.h]quinoxaline	11
7219	Disulfide, bis(5-nitroquinol-8-yl)	11
6230	Doxylamine, succinate	91
4752	Ethanol, 1-(4-amino-6-phenyl-s-triazin-2-ylamino)-2,2,2-trichloro- and s-Triazine, 2,4-bis(2,2,2-trichloro-1-hydroxyethylamino)-6-phenyl-	25
6316	-----, 2-[[4-(7-chloro-4-quinolylamino)pentyl]ethylamino]-, monosulfate	99
5695	-----, 2-(2,6-diamino-s-triazin-4-ylthio)-	46
5741	-----, 2-(2-heptadecylimidazol-1-yl)-	(T)
5658	-----, 2-[(2-imidazolinyl)thio]-, hydrochloride	74
5654	Ether, bis[2-[(1-propionyl-2-imidazolin-2-yl)thio]ethyl]	70
2701	Ethylenimine	80
2949	Glutarimide	20
2941	-----, N-ethyl-	72
2950	-----, N-phenyl-	63

TABLE I

Code No.	Classification and Name	K Value
HETEROCLIC COMPOUNDS		
Nitrogen		
5454	Glycolic acid, [(4,5-dihydro-2-imidazolyl)thio]-, hydrochloride	48
4324	Glycoluril	27
3453	-----, 1,3,4,6-tetrachloro-3a,6a-diphenyl-	64
4327	-----, 1,3,4,6-tetrakis(hydroxymethyl)-	57
5190	Guanazole, salt with $\frac{1}{2}$ f. wt. oxalic acid	70
6632	Guanidine, (2-benzimidazolyl)-	100
5192	-----, 1H-tetrazol-5-yl-	93
6099	Hexahydro-vic-triazine, 1,2,3-triacrylyl-	97
6272	Homophthalimide, N-phenyl-	16
5794	Hydantoin, 1-amino-, monohydrochloride	87
5888	-----, 1,3-dibromo-5,5-dimethyl-	68
5885	-----, 1,3-dichloro-5,5-dimethyl-	97
6645	-----, 5-phenyl-5-(phenylthiomethyl)-	73
4548	Hydrazine, 1-(10-undecenoyl)-2-(1-pyridylcarbonyl)-	100
3660	Hydrosulfamine, N-cyclohexyl-S-(1-piperidylthiocarbonyl)-	82
2910	Hydrouracil, 6-imino-5-isonitrile	-35
5647	Imidazole, 4,5-dihydro-1-(2-aminoethyl)-2-[(3,4-dichlorobenzyl)thio]-, dihydrochloride	88
6801	-----, 1-(2-hydroxyethyl)-	51
7218	2-Imidazolethiol, 1-ethyl-	83
6405*	Imidazolidine, 1,3-bis(3,5,5-trimethylhexyl)-2-(2,4,4-trimethylpentyl)-	92
4075	-----, 2-heptadecyl-, acetate	66
3925	-----, 1,2,3-triphenyl-	73
2775	2-Imidazolidinethione	66
3646	-----, 1,3-diphenyl-	5
5455	-----, 1-methyldithiocarbonyl-	91
6397	2-Imidazolidinone, 1-(2-aminoethyl)-	6
6398	-----, 1,3-bis(3,5,5-trimethylhexyl)-	89
6396	-----, 1-(2-hydroxyethyl)-	-37
3218	-----, 2-thio-	54
4325	2-Imidazolidone	48
4476	-----, 1,3-bis(methoxymethyl)-	21
5152	2-Imidazoline, 1-(2-aminoethyl)-2-heptadecyl-	96
5652	-----, 2-[(6-chloro-1,3-benzodioxan-8-yl)methylthiol]-hydrochloride	76
5651	-----, 2-[(o-chlorobenzyl)thio]-, hydrochloride	89
5642*	-----, 2-[(p-chlorobenzyl)thio]-, hydrochloride	98
5643*	-----, 2-[2-(2-chloroethoxy)ethylthio]-	97
5698	-----, 2-decythio-, hydrobromide	93
5430	-----, 1-[2-(3,4-dichlorobenzenesulfonamido)ethyl]-2-[(3,4-dichlorobenzyl)thio]-	87
5637	-----, 2-decythio-, hydrobromide	83
5660	-----, 1-[2-(3,4-dichlorobenzenesulfonamido)ethyl]-2-[(3,4-dichlorobenzyl)thio]-	54

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Nitrogen		
5645	2-Imidazoline, 2-[(3,4-dichlorobenzyl)thio]-, 3,4-di-chlorophenylsulfinate	98
5646	fluosilicate	66
5649	picrate	93
5644	thiocyanate	89
5650	-----, 2-[(2,4-dichlorobenzyl)thio]-, picrate	89
3537	-----, 1-dodecyl-2-methyl-	96
4487*	-----, 2-dodecylthio-	89
4750	-----, 2,2'-ethylenebis(oxyethylenethio)di-, dihydrochloride	71
5653	-----, 2,2'-ethylenedithiobis-, dihydrobromide	90
3328	-----, 2-(x-heptadecenyl)-	86
5655	-----, 2-[[2-(imidazolin-2-ylthio)-1-vinylethyl]thio]-, dihydrochloride	88
5431	-----, 1-(methoxymethyl)-2-(methoxymethylthio)-	50
3036	-----, 2-methyl-	48
4151	-----, 2-naphthenyl-	85
5641	-----, 2-octadecylthio-	62
5657	-----, 2-[[2-[2-(p-octylphenoxy)ethoxy]ethyl]thio]-, hydrochloride	85
5656	-----, 2-[[2-[2-phenoxyethoxy]ethyl]thio]-	76
5639	-----, 2-tetradecylthio-	94
3874	-----, 2,4,5-tri(2-furyl)-	98
5638	-----, 2-[(5,5,7-trimethyl-2-octenyl)thio]-, hydrochloride	97
3034, 5151		81, 93
5740	-----, 2-undecyl-	80
4318, 7006*	1-Imidazolineethanol, x-heptadecen-2-yl-	86, 99
4319	-----, 2-heptadecyl-	90
4317	-----, 2-tridecyl-	90
5805	2-Imidazoline-1-ethanol, 2-(x-heptadecenyl)-, carbanilate	81
4096	2-Imidazolineethanol, with 2-decyl and 2-dodecyl acetates	93
Imidazolium compounds.		
6998*	1(or 3)-benzyl-2-coco-1-(2-hydroxyethyl)-2-chloride, 60 percent in isopropyl alcohol	92
7000*	1(or 3)-benzyl-x-heptadecen-2-yl-1-(2-hydroxyethyl)-2-chloride, 60 percent in isopropyl alcohol	92
7138*	3-benzyl-1-methyl-2-undecyl----- bromide	99
7005	1(or 3)-(4-chlorobutyl)-x-heptadecen-2-yl-1-(2-hydroxyethyl)-2----- chloride, 60 percent in isopropyl alcohol	97
4467	2(3H)-Imidazolone, 4,5-diphenyl-	100
2917	Indole	74

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Nitrogen		
7273	2-Indolecarboxylic acid, ethyl ester	76
3674	Isatin	44
3611	-----, 1-acetyl-	17
3614	-----, 5,7-dinitro-	96
3414	-----, 7-methyl-	81
5994	Isobarbituric acid, 5-thio-	47
3459	Isocyanuric acid, trichloro-	97
7102	-----, triphenyl-	88
4247	Isoimidazole, 2,2-dibenzyl-4,5-diphenyl-, monohydrate	-24
4244	2H-Isoimidazole, 2,2-dimethyl-4,5-diphenyl-	94
4246	-----, 2,2,4,5-tetraphenyl-	-54
6061	Isoniazid	80
4544	Isonicotinamide, N-(3-guanylguanidino)-	90
4559	Isonicotinic acid, 2-chloro-, hydrazide	88
4492	-----, 2,6-dihydroxy-	49
6238	Isoquinoline, 8-[3-(diethylamino)propyl]amino]-, dihydrochloride	96
6289	-----, 1-[3-(dihexylamino)propyl]amino]-, dihydrochloride	91
Isoquinolinium compounds.		
3416	2-dodecyl----- p-toluenesulfonate	95
3062	Itaconimide	85
6225	Lepidine, 8-[2-(diethylamino)ethyl]amino]-6-methoxy-, dihydrochloride	95
6226	-----, 6-methoxy-8-[1-methyl-4-(propylamino)butyl]-amino]-, dihydrochloride	87
Lepidinium compounds.		
4020	1-isopentyl- $\alpha$ -[1-isopentyl-4(1H)-quinolylidene]-	-6
	----- iodide	
6449	Levopimamic acid, addition product with N-phenylmaleimide	-42
3170, 6733	Maleimide	99
5832	-----, N-(2-acetamidoethyl)-2,3-dichloro-	95
7009	-----, N-acetoxyethyl-	95
5823	-----, N-allyl-2,3-dichloro-	100
5768	-----, N-anilino-	68
5833	-----, N-benzyl-2,3-dichloro-	55
6764	-----, N-benzylideneamino-	73
4811, 5113	-----, N-butyl-	100
6741	-----, N-tert-butylcarbamoyl-	85
6740	-----, N-carbamoyl-	87
3808	-----, N-(m-chlorophenyl)-	73
3807	-----, N-(o-chlorophenyl)-	80
3809	-----, N-(p-chlorophenyl)-	84

TABLE I

Code No.	Classification and Name	K Value
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## HETEROCYCLIC COMPOUNDS

## Nitrogen

5835	Maleimide, 2,3-dichloro-N-cyclohexyl-	56
5829	-----, 2,3-dichloro-N-decyl-	89
5825	-----, 2,3-dichloro-N-ethyl-	100
5831	-----, 2,3-dichloro-N-(2-ethylhexyl)-	92
5828	-----, 2,3-dichloro-N-hexyl-	98
5827	-----, 2,3-dichloro-N-isobutyl-	100
5830	-----, 2,3-dichloro-N-(2-methoxyethyl)-	97
5824	-----, 2,3-dichloro-N-methyl-	100
5834	-----, 2,3-dichloro-N-phenethyl-	33
5453	-----, 2,3-dichloro-N-phenyl-	24
5826	-----, 2,3-dichloro-N-propyl-	98
5837	-----, 2,3-dichloro-N-(m-tolyl)-	19
5836	-----, 2,3-dichloro-N-(o-tolyl)-	77
5838	-----, 2,3-dichloro-N-(p-tolyl)-	51
2968	-----, N-dodecyl-	87
3113	-----, N-ethyl-	79
6738*	-----, N-hydroxymethyl-	99
6734	-----, N-isopropyl-	83
3112, 4326	-----, N-methyl-	100
3786, 6735*	-----, N-phenyl-	81, 98
6736	-----, N,N'-(1,3-phenylene)bis-	76
6737*	-----, N-propionyloxymethyl-	98
6759*	-----, N-thiocyanatomethyl-	99
3810, 5840	-----, N-o-tolyl-	92, 98
2965	-----, N-p-tolyl-	51
5327	Maleinimide, N-m-[bis(2-hydroxyethyl)amino]phenyl-	-3
7265	Malonic acid, 3-indolylmethyl-	20
4738	Melamine, N <sup>2</sup> ,N <sup>2</sup> -bis(2-methylallyl)-	83
4485*	-----, N <sup>2</sup> ,N <sup>2</sup> -dimethyl-	95
4733	-----, N <sup>2</sup> -phenyl-	54
3654	-----, N <sup>2</sup> ,N <sup>4</sup> ,N <sup>6</sup> -tris(2-benzothiazolylthiomethyl)-	3
7268	Mesitol, α <sup>2</sup> -(2-pipercolino)-, hydrochloride	95
3422	Metanicotine	95
6232	Metrazole	91
6414	1,5-Naphthalenedisulfonic acid, 4-(2-mercaptop-4,4,6-trimethyl-1(4H)-pyrimidinyl)-	91
6413	2-Naphthalenesulfonic acid, 5-(2-mercaptop-4,4,6-trimethyl-1(4H)-pyrimidinyl)-	59
5239	2-Naphthol, 1-(piperidinomethyl)-	23
5766	Naphthostyryl, 5-nitro-	99
3424	Nicotinamide, N-cyclohexyl-	99
6638	Nicotinanilide, 4'-sulfanilyl-	51
		64

TABLE I

Code No.	Classification an . Name	K Value
HETEROCYCLIC COMPOUNDS		
Nitrogen		
2772	Nicotine, compound with 1/3 f. wt. aluminium(III) picrate	36
2770	compound with $\frac{1}{2}$ f. wt. cadmium(II) benzoate	90
3002	compound with $\frac{1}{2}$ f. wt. cadmium(II) <u>o</u> -benzoyl- benzoate, trihydrate	100
2764	compound with $\frac{1}{2}$ f. wt. cadmium(II) salicylate and 1 f. wt. salicylic acid, monohydrate	95
3006	compound with $\frac{1}{2}$ f. wt. cadmium(II) thiocyanate	100
3063	compound with $\frac{1}{2}$ f. wt. cadmium(II) thiocyanate and 1 f. wt. thiocyanic acid	99
3003	compound with $\frac{1}{2}$ f. wt. cobalt(II) <u>o</u> -benzoyl- benzoate, trihydrate	100
2765	compound with $\frac{1}{2}$ f. wt. cobalt(II) salicylate and 1 f. wt. salicylic acid, monohydrate	91
3009	compound with $\frac{1}{2}$ f. wt. cobalt(II) thiocyanate and 1 f. wt. thiocyanic acid	99
2771	compound with $\frac{1}{2}$ f. wt. copper(II) benzoate, mono- hydrate	98
3001	compound with $\frac{1}{2}$ f. wt. copper(II) <u>o</u> -benzoyl- benzoate, and 1 f. wt. <u>o</u> -benzoylbenzoic acid	94
2763	compound with $\frac{1}{2}$ f. wt. copper(II) fumarate, penta- hydrate	99
2762	compound with 1 f. wt. copper(II) phthalate and 1 f. wt. phthalic acid, hydrate	100
3004	compound with 1 f. wt. copper(II) thiocyanate	100
3007	compound with $\frac{1}{2}$ f. wt. copper(II) thiocyanate and 1 f. wt. thiocyanic acid	100
2767	compound with $\frac{1}{2}$ f. wt. manganese(II) salicylate and 1 f. wt. salicylic acid, monohydrate	96
3008	compound with $\frac{1}{2}$ f. wt. manganese(II) thiocyanate and 1 f. wt. thiocyanic acid	92
2768	compound with $\frac{1}{2}$ f. wt. nickel(II) salicylate and 1 f. wt. salicylic acid, monohydrate	93
3005	compound with 1/3 f. wt. nickel(II) thiocyanate	99
2761	compound with 2 f. wt. zinc oxalate and 1 f. wt. oxalic acid, pentahydrate	94
2769	compound with $\frac{1}{2}$ f. wt. zinc salicylate and 1 f. wt. salicylic acid, monohydrate	79
2774	compound with $\frac{1}{2}$ f. wt. zinc thiocyanate	96
2773	compound with 1 f. wt. zinc thiocyanate and 1 f. wt. thiocyanic acid	89
7264	Nicotinic acid, 5-fluoro-	34

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Nitrogen		
	Nicotinium compounds.	
2776	bis(3,4-dichlorobenzyl)----- dichloride	75
2751	dibutyl----- dibromide	42
2804	didodecyl----- dipicrate	87
2807	diethylenebis----- dibromide	93
2741	dimethyl----- dibromide	7
2742	dimethyl----- diiodide	53
2784	dimethyl----- di-p-toluenesulfonate	52
5846	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboximide, <u>N</u> -ethyl-	54
5879	-----, <u>N</u> -1-naphthyl-	32
5944	7-Oxabicyclo[2.2.1]heptane-2-carboxylic acid, 3-(4H-1,2,4-triazol-3-ylcarbamoyl)-	58
5615	2-Pentanone, 4-(4,6-diamino-s-triazin-2-yl)-4-methyl-	68
4329	4-Penten-2-one, 3,3-bis[2-(4,6-diamino-s-triazin-2-yl)- ethyl]-4-methyl-	40
3853	6(5H)-Phenanthridinone	27
6063	2-Phenazinol, 8-amino-7-methyl-	20
5118	Phenol, p-(1,5-diphenyl-2-pyrazolin-3-yl)-	57
6569*	Phosphine oxide, tris(1-aziridinyl)-	100
6450*	Phosphine sulfide, tris(1-aziridinyl)-	93
6979	1,4-Phthalazinedione, 5-amino-2,3-dihydrc-	42
6046	-----, 2,3-dihydro-5-(p-nitrobenzamido)-	-2
4305	1(2H)-Phthalazole, 4-methyl-2-phenyl-	69
5973	Phthalic acid, 3-nitro-, hydrazide	29
3708	Phthalimide	30
4817	-----, 4-acetamido-	56
2948	-----, <u>N</u> -allyl-	94
4818	-----, o-amino-	66
6478	-----, <u>N</u> -(5-amino-2-methylbenzyl)-	20
5262	-----, <u>N</u> -(anilinomethyl)-	60
3346	-----, <u>N</u> -benzyl-	48
5266	-----, <u>N</u> -[(4-biphenylamino)methyl]-	32
5687	-----, <u>N</u> -[bis(p-chlorophenyl)methyl]-	65
5265	-----, <u>N</u> -[(m-bromoanilino)methyl]-	38
5338, 5975	-----, <u>N</u> -(2-bromoethyl)-	59, 84
7058	-----, <u>N</u> -(2-bromoethyl)-	93
6047	-----, <u>N</u> -(2-bromoethyl)-3-nitro-	87
6053	-----, <u>N</u> -(2-bromoethyl)-4-nitro-	82
3722	-----, <u>N</u> -(3-bromopropyl)-	70
3260, 4861	-----, <u>N</u> -butyl-	85, 97
6051	-----, <u>N</u> -butyl-3-nitro-	84
6057	-----, <u>N</u> -(o-chlorobenzyl)-4-nitro-	100

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Nitrogen		
6058	Phthalimide, N-(p-chlorobenzyl)-4-nitro-	87
4412	-----, N-(m-chlorophenyl)-	26
5977	-----, N-(3-cyanopropyl)-	80
2963	-----, N-decyl-	83
2925	-----, N-dodecyl-	-17
6324	-----, N-dodecyl-4-nitro-	98
5261	-----, N-[ (p-ethoxyanilino)methyl]-	-7
2928, 4384	-----, N-ethyl-	54, 90
5976	-----, N,N'-ethylenebis-	52
5980	-----, N-ethyl-3-nitro-	87
3114	-----, N-hexyl-	90
5985	-----, N-hexyl-3-nitro-	49
6055	-----, N-hexyl-4-nitro-	58
3257	-----, N-2-hydroxyethyl-	46
4731	oleate	8
4732	stearate	-116
6050	-----, N-(3-hydroxy-4-hexenyl)-	76
5987	-----, N-(3-hydroxy-3-methylbutyl)-	76
6049	-----, N-(3-hydroxy-3-methylpentyl)-	71
5529	-----, N-(o-hydroxyphenyl)-	44
5264	-----, N-[ (p-iodoanilino)methyl]-	37
2960	-----, N-isobutyl-	97
6045	-----, N-isobutyl-3-nitro-	55
2947, 4385	-----, N-isopropyl-	77, 100
5983	-----, N-isopropyl-3-nitro-	81
5268	-----, N-[ (p-methoxyanilino)methyl]-	71
2927	-----, N-methyl-	62
5269	-----, N-[ p-(methylcarbamoyl)anilinomethyl]-	74
5974	-----, N-(1-methylheptyl)-	41
5981	-----, N-methyl-3-nitro-	72
6424	-----, N-(3-methylpyrid-2-yl)-	91
6433	-----, N-(6-methylpyrid-2-yl)-	77
5259	-----, N-(morpholinomethyl)-	69
5392	-----, N-(1-naphthyl)-	50
3606	-----, N-(2-naphthyl)-	45
6274	-----, 4-nitro-	87
5984	-----, 3-nitro-N-octyl-	59
6056	-----, 4-nitro-N-octyl-	94
5986	-----, 3-nitro-N-pentyl-	93
6052	-----, 3-nitro-N-phenethyl-	66
4387	-----, N-(m-nitrophenyl)-	63
6048	-----, 3-nitro-N-(2-phthalimidooethyl)-	-59
6054	-----, 4-nitro-N-(2-phthalimidooethyl)-	36

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Nitrogen		
5982	Phthalimide, 3-nitro-N-propyl-	93
2924, 4359	-----, N-octyl-	65, 88
5424	-----, N-(9-oxofluoren-2-yl)-	-17
2967	-----, N-pentyl-	25
4306	-----, N-phenacyl-	21
3258	-----, N-phenyl-	-6
2923	-----, N-propyl-	71
5686	-----, tetrachloro-	95
6271	-----, 3,4,5,6-tetrachloro-N-[2-(diethylamino)ethyl]-	43
5843	-----, 1,2,3,6-tetrahydro-, N-ethyl-	89
3712	-----, 1,2,3,6-tetrahydro-, N-trichloromethylthio-	57
5260	-----, N-(m-toluidinomethyl)-	16
2962, 5530	-----, N-m-tolyl-	-277, 44
2961, 3607	-----, N-o-tolyl-	50, 54
2926	-----, N-p-tolyl-	-9
5263	-----, N-(2,4-xylidinomethyl)-	88
5267	-----, N-(2,5-xylidinomethyl)-	70
6126	2-Picoline, 6-acetamido-	85
6236	-----, 6-amino-	93
6712	hydrochloride	91
6504	-----, 6-benzamido-	97
6127	3-Picoline, 2-acetamido-	84
6235	-----, 2-amino-	97
6507	-----, 2-benzamido-	98
6128	4-Picoline, 2-ac amido-	65
6237	-----, 2-amino-	100
7161*	Picolinic acid, hydrazide	98
	Picolinium compounds.	98
3420	1-dodecyl-2----- p-toluenesulfonate	94
4251	1-methyl-2----- iodide	77
3419	1-dodecyl-3----- p-toluenesulfonate	80
3418	1-dodecyl-4----- p-toluenesulfonate	93
3920	2-Pipecoline	84
7266	-----, 1-(3,4-dimethoxybenzyl)-, hydrochloride	81
7262	-----, 1-(2-methoxy-5-methylbenzyl)-, hydrochloride	78
7269	-----, 1-(5-methyl-2-methylthiobenzyl)-, hydrochloride	63
6973	Piperazine, hydrate	18
6692	-----, 1-acetyl-4-dodecyl-	79
6791	-----, 1-(2-aminoethyl)-	24
6512	-----, 1,4-dibenzyl-, dihydrochloride	99
6792	-----, 2,5-diethyl-	95
6693	-----, 1,4-dilauroyl-	43
6789	-----, 2,6-dimethyl-	47

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Nitrogen		
6790*	Piperazine, 2,5-dimethyl-1,4-dinitroso-	100
4402	-----, 1,4-dinitroso-	100
6793	-----, 1-ethyl-	71
6794*	-----, 1-phenyl-	100
6795*	-----, 2,3,5,6-tetramethyl-	27
5246	1,4-Piperazinedicarboxylic acid, 2,5-dimethyl-, disopropyl ester	97
4250	2,5-Piperazinedione	65
	Piperazinium compounds.	
6554	1,4-didodecyl-1,4-diethyl----- bis(ethyl sulfate)	96
6634	1,4-diethyl-1,4-dihexadecyl----- bis(ethyl sulfate)	48
5619	2-Piperazinone, 4-(4,6-diamino-s-triazin-2-yl)-3,3-dimethyl-	94
5620	Piperazone, 4-[4,6-bis(chloroamino)-s-triazin-2-yl]-1-chloro-3,3-dimethyl-	92
4991	Piperidine, 1-(p-anisoyl)-	94
6281	-----, 1-benzoyl-	67
3266	-----, 1-benzoyl-3-[4-(N-methylbenzamido)butyl]-	89
6314	-----, 3-[(diphenylmethyl)amino]-1-methyl-, dihydrochloride	96
3362	-----, 1,1'-[dithiocobis(1-methylethylene)]di-, dihydrochloride	93
6142	-----, salt with 1 f. wt. isodextropimaric acid	66
7222	1-Piperidinebutyronitrile, $\alpha,\alpha$ -diphenyl-	85
3662	1-Piperidinecarbodithioic acid, 1-piperidinium salt	86
5076	1-Piperidinecarbonitrile	98
5243	1-Piperidinecarboxylic acid, 5-ethyl-2-methyl-, isopropyl ester	97
5240	-----, isopropyl ester	81
6381	1-Piperidineethanol, $\alpha$ -carvacryl-, hydrochloride	88
5991	1-Piperidinepropionitrile, $\alpha$ -phenyl-, hydrochloride	88
6707	1-Piperidinesulfonamide, N,N,2-trimethyl-	93
	Piperidinium compounds.	
3356	1-carboxymethyl-1-methyl----- chloride, tetradecyl ester	93
6302	1-ethyl-3-hydroxy-1-methyl----- bromide, benzilic acid ester	86
6305	3-Piperidinol, 1-ethyl-, hydrochloride	28
6304	diphenylacetate, hydrochloride	35
6311	ester with $\alpha$ -phenylcyclohexaneacetic acid, hydrochloride	95
6310	-----, 1-methyl-, diphenylacetate, hydrochloride	67

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Nitrogen		
6667	2-Propanol, 1-(7-chloro-4-quinolylamino)-3-diethyl-amino-, diphosphate	97
7038	9-Propionic acid, 3,6-di- <u>tert</u> -butylcarbazole-	<u>63</u>
2854	Propionic acid, 3-indolyl-	71
6284	Propophenone, 3-phenyl-3-piperidino-Pseudoindolium compounds.	81
4744	2-[4-[(2-chloroethyl)ethylamino]-2-methylstyryl]-1,3,3-trimethyl-3 <u>H</u> -chloride	99
4742	2-[p-[(2-chloroethyl)methylamino]styryl]-1,3,3-trimethyl-3 <u>H</u> -chloride	87
4719	2-[2-(2,4-dimethoxyanilino)vinyl]-1,3,3-trimethyl-3 <u>H</u> -chloride	87
4740	1,3,3-trimethyl-2-[2-[[2-methylbenzothiazol-5(or 6)-yl]amino]vinyl]-3 <u>H</u> -chloride	66
4741	1,3,3-trimethyl-2-[2-(2-methyl-1-indolyl)vinyl]-3 <u>H</u> -chloride	90
4746*	1,3,3-trimethyl-2-[2-(1-methyl-2-phenyl-3-indolyl)-vinyl]-3 <u>H</u> -chloride	90
5995	Pseudourea, 2-(1,2,3,4-tetrahydro-2,4-dioxo-5-pyrimidinyl)-2-thio-, hydrochloride	100
5251	Purine, 2,6-bis(diethylamino)-	44
6643	Pyrazine, 2,3-bis( <u>N</u> <sup>4</sup> -acetylulfanilamido)-5,6-dimethyl-----, 2,3,5,6-tetramethyl-	96
6788	3-Pyrazolecarboxylic acid, 5-oxo-, ethyl ester	62
4936	3,5-Pyrazolidinedione, 4-butyl-1,2-diphenyl-, sodium derivative	55
6064	2-Pyrazoline-3-carboxylic acid, 5-oxo-1-( <u>o</u> -sulfophenyl)-4-( <u>o</u> -sulfophenylazo)-, salt with 2 f. wt. dicyclohexylamine	79
4751*	5-Pyrazolone, 1-amino-1-phenyl-5(4 <u>H</u> )-Pyrazolone, 4-isonitroso-3-methyl-1-phenyl-----, 3-methyl-1-phenyl-	100
3615	4-Pyridazineacetic acid, 1,2,3,4-tetrahydro-3,6-dioxo-2-phenyl-, ethyl ester	58
6084	3,6-Pyridazinediol, 4-methyl-	60
3791	3,6-Pyridazinedione, 4,5-dichloro-1,2-dihydro-----, 1,2-dihydro-, 2,2'-iminodiethanol salt	65
4018	3(2H)-Pyridazinone, 4,5-dichloro-2-phenyl-	13
5325	3(2H)-Pyridazone, 4,5-dihydro-	18
5841	Pyridine, 2-acetamido-----, 5-amino-2-sulfanilyl-----, 5-(2-anilinoethyl)-2-methyl-----, 2-bromo-	79
7294		22
3668		74
4931		96
6125		96
6291		77
7114		86
3097		69

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Nitrogen		
3098	Pyridine, 3-bromo-	54
3983	-----, 2-chloro-5-nitro-	76
7171	-----, 2-(p-chlorostyryl)-	92
7172	-----, 4-(p-chlorostyryl)-	92
7257	-----, compound with diborane	100
3358	-----, 2,6-diamino-	82
2739	-----, 2,6-distyryl-	6
5312, 5803	-----, 2-(furfurylamino)-	86, 99
3806	-----, 2-[2-(2-furyl)vinyl]-	97
6666	-----, 2-[2-(1-naphthyl)ethyl]-, hydrochloride	83
5874	-----, 3-(3-nitro-2-pyrazolin-5-yl)-	95
3421	-----, 2-(2-rrrolin-2-yl)-	94
7135	3-Pyridineacetic acid, ethyl ester	83
5195	2-Pyridinecarbamic acid, 5-chloro-, isopropyl ester	55
4899	-----, 4,6-dimethyl-, isopropyl ester	92
5176	-----, 3-methyl-, isopropyl ester	89
5177	-----, 4-methyl-, isopropyl ester	70
5178	-----, 5-methyl-, isopropyl ester	73
5179	-----, 6-methyl-, isopropyl ester	81
5347	3,5-Pyridinedicarboxylic acid, 2,6-dimethyl-, diethyl ester	61
5284	2-Pyridineethanol, carbanilate	56
4664	m-nitrobenzoate	80
4468	-----, $\alpha$ -(trichloromethyl)-	97
4682	2-Pyridinethiol, 1-oxide, sodium derivative	100
Pyridinium compounds.		
3613	1-(carboxymethyl)----- chloride, hydrazide	100
6317	1-(6-chloro-3-phenanthrylcarbonylmethyl)----- bromide	-36
3799	1-(2,4-dinitrophenyl)----- chloride	87
3417	1-dodecyl-2,4-dimethyl----- p-toluenesulfonate	97
3661	1-[2-(dodecylthio)ethyl]----- chloride	97
4122	1-methyl-2-(3-phenyl-1,3-butadienyl)----- methyl sulfate, polymer	58
3665	1-[2-(octylthio)ethyl]----- chloride	97
3979	1-pentyl----- benzenesulfonate	88
3889	2-Pyridinol	87
5911	3-Pyridinol, carbanilate	80
3937	2( <sup>1</sup> H)-Pyridone, 3-cyano-4,6-dimethyl-----, 1-methyl-	70
3765, 7040	2H-Pyrido[1,2a]pyrimidin-3-ol, 3,4-dihydro-, mono-hydrochloride	-4, 29
6626	Pyrimidine, 2-amino-4-chloro-6-methyl-	72
3472		64

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Nitrogen		
3445	Pyrimidine, 2-amino-4,6-dimethyl-	69
4035	-----, 5-amino-5-methyl-1,3-bis(1-methylheptyl)hexahydro-	93
5739	-----, 1-(3-aminopropyl)-2-heptadecyl-1,x,x,x-tetrahydro-	71
4036	-----, 1,3-bis(1-methylheptyl)-hexahydro-5-methyl-5-nitro-	86
5738	-----, 2-heptadecyl-x,x,x,x-tetrahydro-4-methyl-	84
5737	-----, x,x,x,x-tetrahydro-2-undecyl-	67
5012	5-Pyrimidinocarboxylic acid, 1,2,3,4-tetrahydro-2,4-dioxo-, monohydrate	33
5036	-----, 1,2,3,4-tetrahydro-4-oxo-2-thioxo-, ethyl ester	88
6286	1( <sup>4</sup> H)-Pyrimidineethanol, 2-heptadecyl-5,6-dihydro-	78
6465	2-Pyrimidinethiol, 1,1'-(4,4'-biphenylene)bis[1,4-dihydro-4,4,6-trimethyl-	67
6407	-----, 1-(2-cyclohexylcyclohexyl)-1,4-dihydro-4,4,6-trimethyl-	84
6404	-----, 1-cyclohexyl-1,4-dihydro-4,4,6-trimethyl-	38
6246	-----, 1,4-dihydro-1,4,4,6-tetramethyl-	96
4047	-----, 1,4-dihydro-4,4,6-trimethyl-	93
6467	-----, 1,4-dihydro-4,4,6-trimethyl-1-phenyl-	78
6463	-----, 1,4-dihydro-4,4,6-trimethyl-1-o-tolyl-	30
6247	-----, 1,1'-p-phenylenebis[1,4-dihydro-4,4,6-trimethyl-2( <sup>1</sup> H)-Pyrimidinethione, 5,6-dihydro-4,6-dimethyl-6-thioureido-	29
3657	-----, 3,4-dihydro-4,4,6-trimethyl-1-(1-naphthyl)-	85
6462	-----, 1,1'-m-phenylenebis[3,4-dihydro-4,4,6-trimethyl-	27
6464	4-Pyrimidinol, 2,6-diamino-5-nitroso-	3
3133, 7221	2-Pyrimidinol, 4,6-dimethyl-, complex with 1 f. wt.	-9, -48
6036	4,4'-dinitrocarbanilide	45
6700	Pyroglutamic acid, 3-pentyl-4-phenyl-	74
6345	Pyromellitic acid, diimide, N,N'-bis(m-chlorophenyl)-	-43
6344	-----, diimide, N,N'-bis(o-chlorophenyl)-	-102
6346	-----, diimide, N,N'-bis(p-chlorophenyl)-	-12
6350	-----, diimide, N,N'-bis(3-chloro-2-tolyl)-	-61
6357	-----, diimide, N,N'-bis(m-ethoxyphenyl)-	-7
6358, 6359	-----, diimide, N,N'-bis(p-ethoxyphenyl)-	39, -16
6355	-----, diimide, N,N'-bis(m-methoxyphenyl)-	-36
6354	-----, diimide, N,N'-bis(o-methoxyphenyl)-	-11
6356	-----, diimide, N,N'-bis(p-methoxyphenyl)-	-59
6348	-----, diimide, N,N'-bis(3-methylpyrid-2-yl)-	98
6349	-----, diimide, N,N'-bis(6-methylpyrid-2-yl)-	75
6333	-----, diimide, N,N'-diallyl-	39

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Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Nitrogen		
6343	Pyromellitic acid, diimide, <u>N,N'</u> -dibenzyl-	-85
6334	-----, diimide, <u>N,N'</u> -dibutyl-	-1
6336	-----, diimide, <u>N,N'</u> -di-sec-butyl-	35
6337	-----, diimide, <u>N,N'</u> -di-tert-butyl-	25
6330	-----, diimide, <u>N,N'</u> -diethyl-	88
6351	-----, diimide, <u>N,N'</u> -di(2-ethylhexyl) .	-19
6341	-----, diimide, <u>N,N'</u> -diheptyl-	-17
6340	-----, diimide, <u>N,N'</u> -dihexyl-	-13
6335	-----, diimide, <u>N,N'</u> -diisobutyl-	-143
6332	-----, diimide, <u>N,N'</u> -diisopropyl-	37
6325	-----, diimide, <u>N,N'</u> -dimethyl-	63
6338	-----, diimide, <u>N,N'</u> -di(1-methylbutyl)-	0
6342	-----, diimide, <u>N,N'</u> -dioctyl-	-59
6339	-----, diimide, <u>N,N'</u> -dipentyl-	-18
6326	-----, diimide, <u>N,N'</u> -diphenyl-	8
6331	-----, diimide, <u>N,N'</u> -dipropyl-	22
6347	-----, diimide, <u>N,N'</u> -di(2-pyridyl)-	-52
6327	-----, diimide, <u>N,N'</u> -di-m-tolyl-	1
6328	-----, diimide, <u>N,N'</u> -di-o-tolyl-	-39
6329	-----, diimide, <u>N,N'</u> -di-p-tolyl-	10
3612	2-Pyrrolecarboxaldehyde	77
5346	3,5-Pyrroledicarboxylic acid, 2,4-dimethyl-, diethyl ester	76
6796*	Pyrrolidine, 2,5-dimethyl-	97
4065	-----, 1-dodecyl-	90
4258	-----, 1-octadecyl-	88
4896	1-Pyrrolidinecarboxylic acid, isopropyl ester	84
Pyrrolidinium compounds.		
2748	1-benzyl-1-methyl-2-(3-pyridyl)----- thiocyanate	89
2744	1-butyl-1-methyl-2-(3-pyridyl)----- thiocyanate	92
2727	1-butyl-1-methyl-2-(3-pyridyl)----- p-toluenesulfonate	97
2747	1-(o-chlorobenzyl)-1-methyl-2-(3-pyridyl)----- thiocyanate	93
2745	1-(2,4-dichlorobenzyl)-1-methyl-2-(3-pyridyl)----- chloride	90
2746	1-(3,4-dichlorobenzyl)-1-methyl-2-(3-pyridyl)----- chloride	80
2740	1,1-dimethyl-2-(3-pyridyl)----- bromide	62
6548*	1-dodecyl-1-ethyl-2,5-dimethyl----- ethyl sulfate	93
2753	1-dodecyl-1-methyl-2-(3-pyridyl)----- chloride	84
2805	1-dodecyl-1-methyl-2-(3-pyridyl)----- oleate	88
2786	1-dodecyl-1-methyl-2-(3-pyridyl)----- p-toluene-sulfonate	83
6553	1-ethyl-2,5-dimethyl----- ethyl sulfate	100

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Nitrogen		
	Pyrrolidinium compounds.	
2752	1,1'-ethylenebis[1-methyl-2-(3-pyridyl)----- bromide	94
6549	1-hexadecyl-1-methyl----- methyl sulfate	71
2731	1-hexadecyl-1-methyl-2-(3-pyridyl)----- bromide	94
2725	1-hexadecyl-1-methyl-2-(3-pyridyl)----- thiocyanate	100
2785	1-hexadecyl-1-methyl-2-(3-pyridyl)----- p-toluene-sulfonate	85
2749	1-methyl-1-octyl-2-(3-pyridyl)----- iodide	92
2750	1-methyl-1-octyl-2-(3-pyridyl)----- thiocyanate	85
3198	2-Pyrrolidone, 5-methyl-----, 1-vinyl-	18
5329	-----, 1-vinyl-	82
3778, 4853	Quinaldonitrile, 1-benzoyl-1,2-dihydro-	47, 64
4704, 5873	2,4(1H,3H)-Quinazolinedione	83, 84
7166	-----, 3-butyl-	92
6379	4(3H)-Quinazolinone, 3-[2-(diethylamino)ethyl]-----, dihydrobromide	75
6067	Quinocrine, salt with 1 f. wt. sulfamic acid	82
7213	Quinoline, 5-acetamido-8-thioacetyl-----	60
3995	-----, 8-amino-6-methoxy-, monohydrochloride	81
6280	-----, 8-[(3-aminopropyl)amino]-6-methoxy-, dihydrochloride	90
6387	-----, 8-[6-[(4-benzylpiperazin-1-yl)hexyl]amino]-6-methoxy-, dioxalate	93
2892	-----, 2-[2,2-bis[p-(dimethylamino)phenyl]ethyl]-----	74
6633	-----, 7-bromo-4-[[4-(diethylamino)-1-methylbutyl]amino]-----, diposphate	97
3721	-----, 5-bromo-6-methoxy-8-nitro-	77
6283	-----, 8-[[6-(diallylamino)hexyl]amino]-6-methoxy-	96
4150	-----, 4,5-dichloro-	90
6312	-----, 8-[[6-(diethylamino)hexyl]amino]-2,6-dimethyl-, oxalate	100
6665	-----, 4-[(4-diethylamino-1-methylbutyl)amino]-6-(dimethylamino)-	82
2806	-----, 2-[p-(diethylamino)styryl]-----	100
6041	-----, 2-(2-fluorenyliminomethyl)-----	54
6285	-----, 8-[[5-(isopropylamino)pentyl]amino]-6-methoxy-3,4-dimethyl-, dihydrobromide	97
6653	-----, 6-methoxy-2-(p-methoxyphenethyl)-----	66
6282	-----, 6-methoxy-8-[[5-[(1-methylbutyl)amino]pentyl]amino]-----, monohydrochloride	95
6651	-----, 2-(p-methoxyphenethyl)-----	71
6652	-----, 4-(p-methoxyphenethyl)-----	74
2760	-----, 8-phenylmercurioxy-	83

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Nitrogen		
6628	Quinoline, 1,2,3,4-tetrahydro-6-methoxy-1-(10-piperidinodecyl)-	91
6627	-----, 1,2,3,4-tetrahydro-6-methoxy-1-(9-piperidinononyl)-	97
5996	3-Quinoliniccarboxylic acid, 7-chloro-4-hydroxy-	59
3984	-----, 8-chloro-4-hydroxy-7-methyl-, ethyl ester	28
3251	2-Quinolineethanol	46
6319	4-Quinolinemethanol, 7-chloro-2-(p-chlorophenyl)-α-(diethylaminomethyl)-, hydrochloride	94
6318	-----, 8-chloro-2-(p-chlorophenyl)-α-2-piperidyl-	79
6320	-----, 3-(p-chlorophenyl)-α-(diethylaminomethyl)-6-methoxy-	75
6540	-----, α-(3-dibutylaminopropyl)-6-methoxy-, hydrochloride	93
3663	2-Quinolinethiol	89
Quinolinium compounds.		
6069	4-chloro-2-[p-(dimethylamino)phenyliminomethyl]-6-methoxy-1-methyl----- chloride	89
3415	1-dodecyl----- p-toluenesulfonate	89
4149	4-Quinolinol, 5-chloro-	94
2886	8-Quinolinol	88
5535	carbanilate	65
2887, 3733	phosphate	75, 69
3633	salt with 1 f. wt. benzoic acid	63
3731	salt with 1 f. wt. maleic acid	63
3625	salt with 1 f. wt. salicylic acid	95
3474	sulfate	61
3051	-----, 5,7-dibromo-	15
6776	-----, 5,7-dichloro-, copper(II) derivative	34
3478	-----, 5,7-dinitro-	81
7275	Spiro[cyclopentane-1,5'-hexahydro-2',4',6'-pyrimidine-trione]	46
2803	Spiro[pseudoisoindole-1,9'-xanthen]-3(2H)-one, 3',6'-bis(dimethylamino)-	44
2738	2-Stilbazole	95
6256	-----, 2',4'-dichloro-	88
6639	Succinanilic acid, 4'-(p-(2,5-dimethyl-1-pyrrolyl)phenylsulfonyl)-	53
5108	Succinimide, N-(2-acetoxyethyl)-	50
6762	-----, α-acetoxythio-N-carbamoyl-x-pentyl-	64
2946	-----, N-allyl-	71
4824	-----, α-anilino-N-phenyl-	44
5683	-----, 2-benzyl-3,3-dimethyl-	79

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Nitrogen		
7099	Succinimide, N-carbamoyl-	42
7087	-----, 2-chloro-3-(x-chlorophenyl)-N-phenyl-	58
3226	-----, 2-chloro-N-phenyl-	86
2955	-----, 2,N-dimethyl-	18
2943	-----, N-ethyl-	0
5682	-----, N-(2-ethylhexyl)-2-methyl-	76
2956	-----, N-ethyl-2-methyl-	52
3115	-----, N-hexyl-	48
4730	-----, N-(2-hydroxy-1,1-dimethylethyl)-, oleate	66
2966	-----, N-isobutyl-	14
2944	-----, N-isopropyl-	-3
2942	-----, N-methyl-	-68
2969, 5681	-----, 2-methyl-	49, 49
2958	-----, 2-methyl-N-phenyl-	27
2957	-----, 2-methyl-N-propyl-	23
2959	-----, 2-methyl-N-p-tolyl-	45
2945	-----, N-propyl-	35
5693, 5922	-----, 2,2,3,3-tetramethyl-	100, 100
3116	-----, N-p-tolyl-	11
5121, 5684	-----, N-vinyl-	88, 77
6705	Sulfamide, N'-antipyrinyl-N,N-dimethyl-	71
6668	Sulfanilamide, N <sup>1</sup> -(5-bromo-2-pyrimidinyl)-	80
6479	-----, N <sup>1</sup> -(6-methyl-3-pyridazinyl)-	25
6974	-----, N <sup>1</sup> -2-pyridyl-	44
3676	Sulfide, bis(1-piperidylthiocarbonyl)	68
5033	1,3,6,8-Tetrazatricyclo[6.2.1.1 <sup>3,6</sup> ]dodecane	90
5191	1H-Tetrazole, 5-amino-	61
5174	1H-Tetrazole-5-carbamic acid, ethyl ester	85
5552	d-Thioneine	12
6412	m-Toluenesulfonic acid, 6-(2-mercaptop-4,4,6-trimethyl-1(4H)-pyrimidinyl)-	50
5701	s-Triazine, 4-[ (2-acetamidoethyl)amino]-2,6-diamino-	43
5935	-----, 2-amino-4-benzenesulfonamido-6-phenyl-	15
5694	-----, 4-amino-6-benzenesulfonamido-2-phenyl-	40
4338	-----, 4,6-bis(methylamino)-2-methyl-	100
4737	-----, 2,4-bis(methylamino)-6-phenyl-	97
5609	-----, 2,4-bis[(1,1,3,3-tetramethylbutyl)amino]-6-chloro-	-2
5611	-----, 4-chloro-2,6-di(isopropylamino)-	93
5429	-----, 2,2'-(3-cyano-3-phenylpentamethylene)bis[4,6-diamino-	10
4328	-----, 2,4-diacetamido-6-phenyl-	29
4337*	-----, 2,4-diamino-6-benzyl-	89

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Code No.	Classification and Name	K Value
HETEROCLIC COMPOUNDS		
Nitrogen		
5616	s-Triazine, 2,6-diamino-4-[1-(butoxy)ethoxy]methyl-	60
5702*, 5703	-----, 2,6-diamino-4-( <u>tert</u> -butylamino)-	<u>90</u> , 70
5614	-----, 2,4-diamino-6-chloro-	95
4925	-----, 4,6-diamino-2-chloro-	75
5606	-----, 2,6-diamino-4-[(1-cyanocyclohexyl)methylamino]-	59
5608	-----, 2,6-diamino-4-[[N-(cyanomethyl)-1,1,3,3-tetra-	
	methylbutyl]amino]-	21
5700	-----, 2,6-diamino-4-(o-cyanophenyl)-	87
5604	-----, 2,6-diamino-4-[(1-cyanopropyl)methylamino]-	-1
4736	-----, 2,4-diamino-6-(2-cyclohexenyl)-	90
5605	-----, 2,6-diamino-4-[(2,4-diamino-s-triazin-4-yl)-	
	amino]-	32
5598	-----, 2,6-diamino-4-[2-[[4-(2,6-diamino-s-triazin-4-yl)butyl]amino]but-2-yl]-	96
5599	-----, 2,6-diamino-4-[2-[[4-(2,6-diamino-s-triazin-4-yl)butyl]amino]prop-2-yl]-	55
5597	-----, 2,6-diamino-4-[2-[[2,6-diamino-s-triazin-4-yl)methyl]amino]but-2-yl]-	63
5600	-----, 2,6-diamino-4-[1-[[2,6-diamino-s-triazin-4-yl)methyl]amino]propyl]-	33
5607	-----, 2,6-diamino-4-[2-[[2,6-diamino-s-triazin-4-yl)methyl]amino]prop-2-yl]-	12
5596	-----, 2,6-diamino-4-[2-(dimethylamino)ethyl]-	34
5595	-----, 2,6-diamino-4-[(dimethylamino)methyl]-	33
5601*	-----, 2,6-diamino-4-[1-[1-(ethoxy)ethoxy]cyclohexyl]-	93
4721	-----, 2,4-diamino-6-(2-furyl)-	98
4735*	-----, 2,4-diamino-6-isopropyl-	97
5760	-----, 2,4-diamino-6-methyl-	73
4339	-----, 2,4-diamino-6-(methylthio)-	100
5767*	-----, 2,4-diamino-6-octadecyl-	93
5591*	-----, 2,6-diamino-4-phenethyl-	92
4336	-----, 2,4-diamino-6-phenyl-	83
4734	-----, 2,4-diamino-6-piperidino-	91
5761	-----, 2,4-diamino-6-(3-sulfopropyl)-, sodium salt	45
5612	-----, 2,6-di( <u>tert</u> -butylamino)-4-chloro-	99
4794	-----, 2,4-dichloro-6-(o-chloroanilino)-	80
5613	-----, 2,6-dichloro-4-(cyclohexylamino)-	76
4490	-----, 2,2'-[oxybis(ethylenethio)]bis[4,6-diamino-	25
4739	-----, 2,2'-o-phenylenebis[4,6-diamino-	84
6456	-----, 1,3,5-tricyclohexylhexahydro-	93
6459	-----, 1,3,5-tridodecylhexahydro-	73
5603	-----, 2,4,6-tri(isopropylamino)-	100
6770	-----, 1,3,5-tris[x-(dimethylamino)propyl]hexahydro-	1

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Nitrogen		
5610	s-Triazine, 2,4,6-tris[(1,1,3,3-tetramethyl)butylamino]-	33
6406*	-----, 1,3,5-tris(3,5,5-trimethylhexyl)hexahydro-	95
5699	2-s-Triazineacetamide, 4,6-diamino-	42
6086	1,2,4-Triazole, 3-amino-	26
5817	4H-1,2,4-Triazole, 4-amino-	43
5122*	-----, 3-amino-, picrate	100
5884	-----, 4-amino-3,5-diethyl-	55
5340	-----, 4-amino-3,5-dimethyl-	41
5883	monohydrochloride	50
7106	-----, 4-amino-3-hydrazino-5-mercaptop-	96
2911	Uracil, 6-amino-	28
2912	-----, 5,6-diamino-, salt with $\frac{1}{2}$ f. wt. sulfuric acid	27
6995	p-Urazine	20
5947	Urea, 1-(3,5-diethyl-4H-1,2,4-triazol-4-yl)-3-p-tolyl-	56
5945	-----, 1-(3,5-dimethyl-4H-1,2,4-triazol-4-yl)-3-phenyl-	51
6403	-----, 1,3-di(2-pyridyl)-2-thio-	96
5172	-----, 1H-tetrazol-5-yl-	32
7267	2,4 Xylenol, $\alpha^2$ -(2-pipecolino)-, hydrochloride	91
Nitrogen and Oxygen		
4547	Benzaldehyde, o-ethoxy-, 2-benzoxazolylhydrazone	23
4563	-----, p-ethylsulfonyl-, 2-benzoxazolylhydrazone	-7
3013	Benzenearsonic acid, p-morpholinylsulfonyl-	81
5175	Benzofurazan, 5-methyl-4-nitro-, N <sup>3</sup> -oxide	100
4313	-----, N-oxide	100
3771	1,3-Benzoxazine, 1-acetyl-4-oxo-2-phenyl-	66
3774	-----, 1-acetyl-2-trichloromethyl-4-oxo-	-50
4943	Benzoxazole, 2-phenyl-	94
3648	2-Benzoxazolethiol	73
6691	2-Benzoxazolinone	56
5877	-----, 5,6-dinitro-	88
4427	o-Cresol. 4-chloro- $\alpha$ -morpholino-	60
4399	-----, $\alpha$ -morpholino-	73
5415	1,4-Cyclonexanedione, 2,5-dimorpholino-	45
6303	D-Fructose, 1-deoxy-1-morpholino-	-4
6787	Isatoic anhydride	36
4691	2-Isoxazolin-5-one, 1-benzylidene-3-methyl-	51
4408	-----, 4-vinylidene-3-methyl-	48
2717	Morpholine, salt w/ $\frac{1}{2}$ 1 f. wt. fluosilicic acid	84
3012	-----, 4-(p-arsenosophenylsulfonyl)-	60
4805	-----, 4-butyryl-	83
3964	-----, 4-(p-chlorophenylsulfonyl)-	29

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Nitrogen and Oxygen		
3963	Morpholine, 4-(3,4-dichlorophenylsulfonyl)-	74
4257	-----, 2,6-dimethyl-4-octadecyl-	96
4063	-----, 4-dodecyl-	82
4064	-----, 4-dodecyl-2,6-dimethyl-	86
5028	-----, 4-(9-fluorenyl)-	72
3175	-----, 4-hexadecyl-	73
6561	salt with 1 f. wt. monobutyl phosphate	83
6562	salt with 1 f. wt. monododecyl phosphate	44
4807	-----, 4-hexanoyl-	88
3723	-----, 4-(2-naphthylthioacetyl)-	78
4397	-----, 4-(m-nitrobenzoyl)-	96
4256	-----, 4-octadecyl-	90
3714	-----, 4-(phenylacetyl)-	55
6704	-----, 4,4'-sulfonyldi-	68
3725	-----, 4-[ (5,6,7,8-tetrahydro-2-naphthyl)thioacetyl]-	32
5413	-----, 4,4'-tetramethylenedi-	88
3956	4-Morpholinecarbodithioic acid, copper(II) salt	-118
3957	mercury(II) salt	92
3958	sodium salt	91
3967	diester with 2,2'-oxydiethanol	63
3962	2-hydroxyethyl ester	49
5020	4-Morpholinecarboxylic acid, isopropyl ester	89
3948	4-Morpholineethanol	49
5014	carbanilate	86
6671	-----, $\alpha$ -(p-bromophenyl)-3-ethyl-, hydrochloride	92
5411	4-Morpholinepropionitrile	86
3819, 4854	4-Morpholinesuccinonitrile	71, 86
6708	4-Morpholinesulfonamide, <u>N,N</u> -dimethyl-	66
Morpholinium compounds.		
6546	4-benzyl-4-[(2,5,8,11,14,17,20-heptamethyl-3,6,9,12,-15,18,21-heptoxo-23-hydroxy)tetracosyl]----- chloride	74
3949	4,4-bis(2-hydroxyethyl)----- chloride	-5
6544	4-(2-carboxyethyl)-4-x-octadecenyl----- betaine	5
6542	4-(2,3-epoxypropyl)-4-hexadecyl----- chloride	72
6568	4-ethyl-4-hexadecyl----- 1-dodecanesulfonate	76
6567*	4-ethyl-4-hexadecyl----- methanesulfonate	93
6565*	4-ethyl-4-hexadecyl----- p-toluenesulfonate	94
3981	4-methyl-4-pentyl----- benzenesulfonate	16
3950	4,4'-oxydiethylenebis[4-(2-hydroxyethyl)]----- chloride	-77
3969	Morpholinocarbodithioic acid, ester with 2-(penta-chlorophenoxy)ethyl mercaptoacetate	78
5418	Morpholinosuccinic acid, dibutyl ester	44
4114	3-Morpholone	14

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Nitrogen and Oxygen		
4479	1,3,5,4H-Oxadiazin-4-one, 3,5-bis(butoxymethyl)tetrahydro-	75
6767	2H-1,2-Oxazine, 3,6-dihydro-4(or 5)-methyl-2-nitroso-	97
6768*	-----, 3,6-dihydro-2-phenyl-	99
4042	Oxazolidine, 4,4-dimethyl-2-phenyl-	-6
3411	2,4-Oxazolidinedione, 5,5-dimethyl-	61
6812	3-Oxazolidineethanol, 2-nonyl-	78
5814	2-Oxazolidinethione, 4-ethyl-	88
6809	2-Oxazolidinone, 5-methyl-	58
6810	-----, 5-phenyl-	48
4726	2-Oxazoline, 2-(8,10-heptadecadienyl)-5-methyl-	61
4727	-----, 2-(8,11-heptadecadienyl)-5-methyl-	65
4725	-----, 2-(8-heptadecenyl)-	42
4728	-----, 2-(8-heptadecenyl)-5-methyl-	51
4729	-----, 2-heptadecyl-5-methyl-	77
4723	-----, 5-methyl-2-undecyl-	65
6399	-----, 5-(2,4,4-trimethylpentyl)-2-undecyl-	45
6483	1-Penten-3-one, 1-(2-furyl)-5-morpholino-, hydrochloride	79
5259	Phthalimide, N-(morpholinomethyl)-	69
6482	1-Propanone, 1-(2,5-diphenyl-3-furyl)-3-morpholino-	85
6476	Propiophenone, 2-(benzylmethyldamino)-3-morpholino-3-phenyl-	58
6481	-----, 2,3-dimorpholino-3-(m-nitrophenyl)-	14
6240	Sulfanilamide, N <sup>1</sup> -(3,4-dimethyl-5-isoxazolyl)-	14
6975	Tin, dichlorodi(4-morpholinobutyl)-	(T)
5421	Tricarballylic acid, β-morpholino-, triallyl ester	98
5417	triethyl ester	32
3653	Trisulfide, bis(morpholinothiocarbonyl)-	34
Nitrogen and Sulfur		
3454	Acetanilide, N-2-benzothiazolyl-	35
3644	-----, 4'-sulfamoylthiazol-2-yl-	-35
3047	Acetic acid, [(2-benzothiazolyl)thio]-	90
5258	-----, (2-imino-4-oxo-5-thiazolidinyl)-	-5
3639	-----, (5-pseudothiohydantoinyl)-	-45
3850	cyclohexylamine salt	78
3849	dicyclohexylamine salt	83
3467	2-ethylhexyl ester	25
3848	hexadecylamine salt	58
3468	sodium salt	5
3976	p-Anisaldehyde, (2-benzothiazolyl)hydrazone	71

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Nitrogen and Sulfur		
3977	Benzaldehyde, p-acetamido-, (2-benzothiazolyl)hydrazone	-15
3975	-----, p-hydroxy-, (6-nitro-2-benzothiazolyl)hydrazone	-52
5889	1,2-Benzisothiazolin-3-one, 2-methyl-, 1,1-dioxide	42
5546	2,1,3-Benzothiadiazole	87
5556	2H-1,4-Benzothiazine-2,2-diacetic acid, 3,4-dihydro-3-oxo-	29
3649	Benzothiazole	73
5123, 5396	-----, 2-amino-5,6-dimethoxy-	100, 97
6233	-----, 6-amino-2-mercaptop-	92
5045	-----, 2-[ (3-buteryl)thio]-	87
6384	-----, 2-butoxy-6-nitro-	89
3690, 5458	-----, 5-chloro-2-mercaptop-	75, 89
3892, 7066	-----, 2-hydrazino-	(T)
3366	-----, 2-(p-methoxyanilino)-	10
3590	-----, 2-phenylmercurithio-	75
7115	-----, 2-thiocyanato-	80
3118, 3506 7292*	2-Benzothiazolesulfenamide, N-cyclohexyl-	51, 89
3479	2-Benzothiazolesulfonic acid, calcium salt	55
3021	2-Benzothiazolethiol, compound with cyclohexylamine	79
3326	copper(II) derivative	45
3921, 7286	zinc derivative	-35, 0
3033	-----, 4-phenyl-	-34
Benzothiazolium compounds.		
5395	2,3-dimethyl----- methyl sulfate	92
3220	Disulfide, N,N'-ethylenebis[N-cyclohexylthiocarbamoyl]	49
6287	1,3,5-Dithiazine, dihydro-2,4,6-trimethyl-, hydrochloride	80
3641	Ethanol, 2-[ (2-benzothiazolyl)thio]-	97
5250	Hydantoin, 5,5-dimethyl-2,4-dithio-	99
3654	Melamine, N <sup>2</sup> ,N <sup>4</sup> ,N <sup>6</sup> -tris(2-benzothiazolylthiomethyl)-	3
2991, 4188	Phenothiazine	93, 68
2710	-----, 10-benzoyl-3,7-bis(dimethylamino)-	-6
6313	-----, 10-(1-ethyl-3-piperidyl)-, hydrochloride	98
2858	-----, 5-oxide	-11
4471	Rhodanine, 5-(3,4-dichlorobenzylidene)-	86
5457	-----, 3,3'-hexamethylenebis-	15
5555	-----, 5-vanillylidene-	67
6709	Sulfanilamide, N <sup>1</sup> -(5,5-dimethyl-2-thiazolin-2-yl)-	35
6386	-----, N <sup>4</sup> -methylene-N <sup>1</sup> -2-thiazolyl-, sodium derivative	12
3923, 7069	-----, N <sup>1</sup> -2-thiazolyI-	20, 88
4554	4H-1,3,4-Thiadiazine-2-thiol, 5-phenyl-	99
4073*	2H-1,3,5-Thiadiazine-2-thione, tetrahydro-3,5-dimethyl-	94

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Code No.	Classification and Name	K Value
HETERO CYCLIC COMPOUNDS		
Nitrogen and Sulfur		
6473	1,2,4-Thiadiazole, 3,5-bis(ethylmercurithio)-	65
5139	1,3,4-Thiadiazole, 2,5-bis(diethyldithiocarbamoyl)-	15
3647	-----, 2,5-dithiol-	42
6460	1,2,5-Thiadiazolidine, 2,5-bis(3,5,5-trimethylhexyl)-, 1,1-dioxide	20
Thiamorpholinium compounds.		
6550, 6551	4-hexadecyl-4-methyl----- methyl sulfate	83, <u>96</u>
4052	6H-1,3-Thiazine-2-thiol, 4,6,6-trimethyl-, copper(I) derivative	19
6510*	sodium derivative	96
6511	zinc derivative	97
3974	Thiazole, 2-acetamido-4,5-bis(acetoxymercuri)-	95
5127*	-----, 2-acetamido-4-methyl-	96
5119	-----, 2-acetamido-5-methyl-	96
5132	-----, 2-acetamido-4-methyl-5-nitro-	96
5004	-----, 2-(2,2,2-trichloroacetamido)-	64
4137	2-Thiazolecarbamic acid, 4,5-bis(chloromercuri)-, benzyl ester	68
4136	-----, ethyl ester	81
3707	4-Thiazolecarboxylic acid, 2-amino-, ethyl ester	55
3119	2-Thiazoleethylsulfenamide, N,N-dipentyl-	88
5812	2-Thiazolidinethione, 4,4-dimethyl-	98
5549	-----, 3-(2-ethylbutyl)-	96
5456	-----, 3-(ethylcarbamoyl)-	95
5548	-----, 3-isopropyl-	100
5547	-----, 5-methyl-	99
7121	4-Thiazolidinone, 5-ethyl-2-imino-	73
3038	-----, 2-imino-	76
3039	-----, 3-phenyl-2-phenylimino-	-13
5345	4-Thiazolidone, 3-butyl-2-butylimino-	99
4558	2-Thiazolol, 4-methyl-	88
3645	4'-(2-Thiazolylsulfamoyl)phthalanilic acid	24
5112*	Urea, 1-phenyl-3-(2-thiazolyl)-	99
Oxygen		
3503	Acetamide, N-cyclohexyl-N-tetrahydrofurfur-2-yl-	77
4102	Acetic acid, (2-hydroxyethoxy)-, lactone	-15
3470	-----, phthalidylidene-, ethyl ester	-4
4862	Acetoacetic acid, 2-(2-hydroxyethyl)-, $\gamma$ -lactone	47
6834, 7035	Acetone, furfurylidene-	97, <u>99</u>
5854	-----, piperonylidene-	50
5316	Acrylic acid, $\beta$ -2-furyl-	51

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Oxygen		
6363, 7028	Acrylophenone, 3-(2-furyl)-	69, <u>96</u>
6701	Allophanic acid, 5-nitrofurfurylidenehydrazide	<u>49</u>
2833	1-Apocamphaneacetic acid, 2-hydroxy-, lactone	75
4178	Benzamide, N-homopiperonyl-3,4,5-trimethoxy-	45
5857	-----, 3,4-methylenedioxy-N,N-dipentyl-	94
5856	-----, 3,4-methylenedioxy-N,N-dipropyl-	<u>97</u>
4343*	Benzene, p-bis(2,3-epoxypropoxy)-	91
4344*	-----, 2-tert-butyl-1,4-bis(2,3-epoxypropoxy)-	95
4345	-----, 1,4-di-tert-butyl-2,5-bis(2,3-epoxypropoxy)-	60
6362	-----, (2,3-epoxypropyl)-	80
4372	1,3-Benzodioxan, 2,4-bis(trichloromethyl)-6-nitro-	63
3767	-----, 8-methoxy-2-methyl-4-oxo-	39
3321	-----, 6-nitro-	57
3820	1,3-Benzodioxan-4-one	86
3770	-----, 6-bromo-2-methyl-	87
3826	-----, 6-chloro-2,8-dimethyl-	88
3752	-----, 6-chloro-2-methyl-	78
3228	-----, 2-(o-chlorophenyl)-	54
3823	-----, 2-(2,6-dichlorophenyl)-	32
3753	-----, 2,8-dimethyl-	85
3736	-----, 2-methyl-	82
3824	-----, 2-(3,4-methylenedioxyphenyl)-	24
3825	-----, 8-methyl-2-(3,4-methylenedioxyphenyl)-	52
3232	-----, 2-(m-nitrophenyl)-	81
3227	-----, 2-phenyl-	84
3822	-----, 2-styryl-	-11
7217	Benzofuran, 3-nitro-	27
3413	Benzoic acid, 2-hydroxymercuri-3-nitro-, $\gamma$ -lactone	98
4763, 4951	-----, p-nitro-, piperonylidenehydrazide	74, 0
4963	-----, piperonylidenehydrazide	39
6477	2H-1-Benzopyran-3-carboxylic acid, 8-allyl-2-oxo-, 2-(dibenzylamino)ethyl ester, hydrochloride	58
5941	Bicyclo[2.2.1]hept-5-ene-2-acetic acid, 2-carboxy-1,4,5,6,7,7-hexachloro-, cyclic anhydride	46
6815	2-Biphenylcarboxylic acid, 5'-chloro-2'-hydroxy-, 6-lactone	95
5007, 5564*	-----, 2'-hydroxy-, 6-lactone	100, <u>97</u>
6819	-----, 2'-hydroxy-5'(?)-nitro-, 6-lactone	78
3636	3,3'-Biphtalide	-32
4182	Bis(homopiperonyl)amine, hydrochloride	96
4081	1-Butene, 1-(2-furyl)-2-nitro-	100
4083	-----, 1-(3,4-methylenedioxyphenyl)-2-nitro-	70
5802	3-Buten-2-one, 4-(5-nitro-2-furyl)-	94

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Oxygen		
2906	Butyric acid, 4-benzoyl-4-hydroxy-2,3-diphenyl-, γ-lactone	-27
5920	-----, 2,4-dihydroxy-3,3-dimethyl-, γ-lactone	36
3397	d-Camphoric anhydride	42
4929	Caproic acid, β-hydroxy-, β-lactone	13
4873	Carbamic acid, furfuryl-, isopropyl ester	85
5795	Carbazic acid, 2-(2-hydroxyethyl)-, γ-lactone, hydrochloride	97
5798	-----, 2-(2-hydroxypropyl)-, γ-lactone, hydrochloride	95
6805*	Carbonic acid, cyclic chloromethylethylene ester	97
6807	cyclic 1,2-dichloroethylene ester	17
3569	cyclic ethylene ester	-8
6799	cyclic methylvinylene ester	14
4863	d-Catechol	31
3406	α-Cellobiose, octaacetate	-10
2734	Chalcone, 3,4-methylenedioxy-	35
4417	Cinnamic acid, α-(β-hydroxy-p-methylstyryl)-, γ-lactone	44
2789	α-Conidendrin, diacetate	41
2794	di-p-toluenesulfonate	22
2790	β-Conidendrin, diacetate	20
2795	di-p-toluenesulfonate	15
2791	α-Conidendrol, tetraacetate	64
2793	tetrabenzoate	10
2792	β-Conidendrol, tetraacetate	30
3775	Coumalic acid, methyl ester	97
3136	Coumarilic acid	77
3603	Coumarin, 3-acetyl-4-hydroxy-	99
5270	-----, 5,7-dihydroxy-4-methyl-	45
3435	-----, 6-methoxy-4-methyl-	-5
7159	-----, 4-methyl-	91
7129	-----, 3,3'-thiobis[4-hydroxy-	64
3675	Crotonic acid, α-anilino-β-chloro-γ-hydroxy-γ-methoxy-, γ-lactone	34
3634	-----, 2-cyano-4-hydroxy-2,4-diphenyl-, γ-lactone	-78
3622	-----, 2,3-dichloro-4-hydroxy-4-phenyl-, γ-lactone	24
6830	-----, 2-furyl-	67
5339	Cyclohexane-1,2-dicarboxylic anhydride, 4,5-dichloro- 3,6-endoxy-	48
4710, 6006	4-Cyclohexene-1,2-dicarboxylic anhydride	57, 31
3911	2-Cyclohexene-1,2-dicarboxylic anhydride, 5-acetyl- 3-carboxymethyl-4,6,6-trihydroxy-6-methyl-, γ-lactone	
6817	6H-Dibenzopyran, 6,6-dimethyl-	44 85

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Oxygen		
5385	m-Dioxane, 2-( <u>p</u> -chlorophenyl)-4-methyl-	90
5377	-----, 2-ethyl-2,4-dimethyl-	17
5380	-----, 2-ethyl-2,5-dimethyl-5-nitro-	94
5211	-----, 5-ethyl-2-nonyl-4-propyl-	71
5367	-----, 2-(2-furyl)-	80
5375	-----, 2-(2-furyl)-4,6-dimethyl-	84
5374	-----, 2-(2-furyl)-5,5-dimethyl-	93
5376	-----, 2-(2-furyl)-4-methyl-	56
5921	-----, 2-isopropyl-5,5-dimethyl-	35
5369	-----, 2-styryl-	40
5212	-----, 4,4,6-trimethyl-2-nonyl-	84
6485	1,3-Dioxepin, 2-sec-butyl-4,7-dihydro-	15
6488	-----, 4,7-dihydro-2-isopropyl-	15
6489	-----, 4,7-dihydro-7-propenyl-	20
5382	1,3-Dioxolane, 2-( <u>o</u> -chlorophenyl)-4,5-dimethyl-	74
5372	-----, 2-( <u>o</u> -chlorophenyl)-4-methyl-	74
5371	-----, 2-( <u>p</u> -chlorophenyl)-4-methyl-	65
5368	-----, 2-ethyl-2,4-dimethyl-	11
5379	-----, 2-(2-furyl)-4,5-dimethyl-	66
5378	-----, 2-(2-furyl)-4-methyl-	42
5305	Ether, ethyl furfuryl	60
5309	-----, furfuryl methyl	31
5320	-----, methyl 5-nitrofurfuryl	84
4979	-----, tetrahydrofurfuryl 2,4-dinitrophenyl	98
4866	Flavanone, d-3,3,4,5,7-pentahydroxy-	28
4134	2-Furaldehyde, azine	97
7032	oxime	90
5786, 7193	semicarbazone	88, 99
5313, 5788	-----, 5-nitro-	96, 95
5799	anti-oxime	89
2796	semicarbazone	37
2799	semioxamazone	85
4974, 6835 7062	2-Furamide	85, 60
2798	-----, 5-nitro-	85, 95
4082*	Furan, 2-(2-bromo-2-nitrovinyl)-	100
3437	-----, 2-chloromercuri-	94
4968	-----, 2-chloro-5-nitro-	94
7151	-----, 5-chloro-(2-nitrovinyl)-	100
5778	-----, 2,5-dieethyltetrahydro-2,5-dimethyl-	39
4420	-----, 2-(2,4-dinitrophenoxyethyl)tetrahydro-	100
2736	-----, 2-methoxymethyl-5-nitro-	95
5317, 5791	-----, 2-nitro-	83, 73

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Oxygen		
3440, 3789 4041*	Furan, 2-(2-nitrovinyl)-	96, 100 <u>100</u>
5107	-----, tetrahydro-2,2,4,4-tetramethyl-	42
2728	-----, 2-[2-(2,4,6-trinitrophenyl)vinyl]-	30
3729	-----, 2-(2,4,6-trinitrostyryl)-	77
3805	2-Furanacrylamide, $\alpha$ -cyano-	71
3628, 5775	2-Furanacrylic acid	-30, 52
5779	-----, <i>cis/trans</i> - $\alpha$ -acetyl-, ethyl ester	94
3804	-----, $\alpha$ -cyano-, ethyl ester	62
3259	2-Furanilide	87
5319, 5774	2-Furanmethanediol, diacetate	81, 60
5307, 5781	dibutyrate	68, 66
5780	dipropionate	59
4007, 5787	-----, 5-nitro-, diacetate	51, 72
5804	dipropionate	86
3623	2(5H)-Furanone, 3,4-dichloro-5-dodecyloxy-	82
3631	-----, 3,4-dichloro-5-hydroxy-, carbanilate	44
3790	-----, 3,4-dichloro-5-phenacyl-	91
3632	-----, 5,5'-oxybis[3,4-dichloro-	65
5496	3(2H)-Furanone, dihydro-2,2,5,5-tetramethyl-	-14
5801	DL- $\overline{\beta}$ -Furanserine	48
5306	Furfuryl alcohol, acetate	59
5308	butyrate	66
3673, 5181	carbanilate	59, 92
4006, 5790	-----, 5-nitro-, acetate	85, 86
5301	bromoacetate	89
2754	chloroacetate	70
5300	p-chlorobenzoate	30
5302	x-chloropropionate	78
4662	-----, tetrahydro-, p-nitrobenzoate	89
5311, 5789	2-Furfuryl alcohol, 5-nitro-	92, 94
6831	Furfurylamine	94
6832	-----, tetrahydro-	94
3629	Furil	(T)
4973*	2-Furoic acid, allyl ester	98
4844	butyl ester	60
6521*	2-chloroethyl ester	25
4972	decyl ester	63
6822	docosyl ester	17
4860, 5215	ethyl ester	48, 38
6820	hexadecyl ester	58
4969	hexyl ester	67
4970	isopentyl ester	61
4964	isopropyl ester	

TABLE I

Code No.	Classification and Name	
	HETEROCYCLIC COMPOUNDS	
	Oxygen	
4843	2-Furoic acid, methyl ester	79
6821	octadecyl ester	34
4971	octyl ester	64
4848	propyl ester	47
4965, 5782	-----, 5-bromo-	83, 93
4966, 5783	-----, 5-chloro-	90, 95
7167	-----, 3,4-dichloro-	86
7168	ethyl ester	78
5784	-----, 5-nitro-	84
4967	ethyl ester	100
5792, 6828	methyl ester	92, 97
5785, 6829	propyl ester	94, 99
4846	-----, 2,3,4,5-tetrachlorotetrahydro-, butyl ester	100
6827	2-chloroethyl ester	100
6826	docosyl ester	10
6823	dodecyl ester	99
4859	ethyl ester	97
6824	hexadecyl ester	95
4845	methyl ester	100
6825	octadecyl ester	97
5162, 5386	octyl ester	100, 100
4847	propyl ester	100
5815	2-Furoyl chloride, 5-nitro-	86
2721	$\alpha$ -D-Glucoside, 1-allyl-	32
3972	D-Glucoside, 1-[bis(2-hydroxyethyl)amino]-	-27
3337	Glutaric anhydride, $\beta,\beta$ -dimethyl-	25
3378	Hemipic anhydride	-52
5169	Heptanedioic acid, 3-(1-hydroxy-1-methylethyl)-,	55
	$\gamma$ -lactone	
5161	Heptanoic acid, 3-(1-hydroxy-1-methylethyl)-6-oxo-,	60
	$\gamma$ -lactone	
5855	2-Heptanone, 1-piperonylidene-	56
3993	Hexanoic acid, 5-hydroxy-4,4-dimethyl-6-nitro-,	81
	$\delta$ -lactone	
4161	Homopiperonylic acid	41
4163	Hydrocinnamic acid, 3,4-methylenedioxy-	11
5652	2-Imidazoline, 2-[(6-chloro-1,3-benzodioxan-8-yl)-	76
	methylthiol]-	
	hydrochloride	89
5651	-----, 2,4,5-tri(2-furyl)-	98
3874	5H-Inden[5,6-d]-1,3-dioxol-5-one, 6,7-dihydro-	78
4162	1,3-Isochromandione	24
3247	Ketone, 2-furyl methyl	45, 81
5314, 5776		

## HETEROCYCLIC COMPOUNDS

## Oxygen

4843	2-Furoic acid, methyl ester	79
6821	octadecyl ester	34
4971	octyl ester	64
4848	propyl ester	47
4965, 5782	-----, 5-bromo-	83, 93
4966, 5783	-----, 5-chloro-	90, 95
7167	-----, 3,4-dichloro-	86
7168	ethyl ester	78
5784	-----, 5-nitro-	84
4967	ethyl ester	100
5792, 6828	methyl ester	92, 97
5785, 6829	propyl ester	94, 99
4846	-----, 2,3,4,5-tetrachlorotetrahydro-, butyl ester	100
6827	2-chloroethyl ester	100
6826	docosyl ester	10
6823	dodecyl ester	99
4859	ethyl ester	97
6824	hexadecyl ester	95
4845	methyl ester	100
6825	octadecyl ester	97
5162, 5386	octyl ester	100, 100
4847	propyl ester	100
5815	2-Furoyl chloride, 5-nitro-	86
2721	$\alpha$ -D-Glucoside, 1-allyl-	32
3972	D-Glucoside, 1-[bis(2-hydroxyethyl)amino]-	-27
3337	Glutaric anhydride, $\beta,\beta$ -dimethyl-	25
3378	Hemipic anhydride	-52
5169	Heptanedioic acid, 3-(1-hydroxy-1-methylethyl)-,	55
	$\gamma$ -lactone	
5161	Heptanoic acid, 3-(1-hydroxy-1-methylethyl)-6-oxo-,	60
	$\gamma$ -lactone	
5855	2-Heptanone, 1-piperonylidene-	56
3993	Hexanoic acid, 5-hydroxy-4,4-dimethyl-6-nitro-,	81
	$\delta$ -lactone	
4161	Homopiperonylic acid	41
4163	Hydrocinnamic acid, 3,4-methylenedioxy-	11
5652	2-Imidazoline, 2-[(6-chloro-1,3-benzodioxan-8-yl)-	76
	methylthiol]-	
	hydrochloride	89
5651	-----, 2,4,5-tri(2-furyl)-	98
3874	5H-Inden[5,6-d]-1,3-dioxol-5-one, 6,7-dihydro-	78
4162	1,3-Isochromandione	24
3247	Ketone, 2-furyl methyl	45, 81
5314, 5776		

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Oxygen		
5318	Ketone, 2-furyl phenyl	99
2797	-----, methyl 5-nitro-2-furyl	100
6696	semicarbazone	97
5777	Malonic acid, furfurylidene-	53
3046, 7185	Malconitrile, furfurylidene-	98, 100
3711	Maltol	28
6440	2,5-Methano-2H-oxireno[ <u>a</u> ]indene, 4,4'-oxy- bis(ethyleneoxy)]bis[octahydro-	59
3821	4H-Naphtho[2,3-d]-m-dioxin-4-one, 2-methyl-	71
2787	2-Naphthoic acid, 4-(3,4-dimethoxyphenyl)-1,2,3,4- tetrahydro-3-(hydroxymethyl)-6,7-dimethoxy-, $\gamma$ -lactone (from $\alpha$ -conidendrin)	38
2788	$\gamma$ -lactone (from $\beta$ -conidendrin)	40
5389	Naringenin	34
6279	Octadecanoic acid, 9,10,12,13-diepoxy-	-17
6278	methyl ester	18
5404	-----, 10,11-epoxy-9,12-dioxo-	22
5408	-----, 10,11-epoxy-12-oxo-	74
5880	7-Oxabicyclo[2.2.1]heptane-2-carboxylic acid, 3-(1-naphthylcarbamoyl)-	83
5944	-----, 3-(4H-1,2,4-triazol-3-ylcarbamoyl)-	58
5846	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboximide, <u>N</u> -ethyl-	54
5879	-----, <u>N</u> -1-naphthyl-	32
6008	7-Oxabicyclo[4.1.0]heptane-2-decanoic acid, 5-butyl- 3(and 4)-carboxy-9,1-epoxy-, diethyl ester	29
6009	and 7-Oxabicyclo[4.1.0]heptane-2-octanoic acid, 3(and 4)-carboxy-5-(1,2-epoxyhexyl)-, diethyl ester	34
5397	7-Oxabicyclo[4.1.0]heptane, d-4-isopropyl-1-methyl-	42
3433	7-Oxabicyclo[2.2.1]hept-5-ene-2,3-dicarboxylic anhydride	90
5164	6-Oxabicyclo[3.2.1]oct-3-e.e., d,1-4,7,7-trimethyl-	56
5165	3-Oxatricyclo[4.1.1.0 <sup>2,4</sup> ]octane, d-2,7,7-trimethyl-	47
3989	Oxepane, dodecafluoro-	-47
3991	Oxonane, hexadecafluoro-	-119
3986	2-Pentenoic acid, 4-hydroxy-, $\gamma$ -lactone, dimer	79
3745, 4013		60, 74
5304	Phthalic anhydride tetrachloro-	84
3602	Phthalide	62
3254	-----, 3-benzylidene-	11
2801	-----, 3,3-bis[p-(dimethylamino)phenyl]-	-239
2802	-----, 3,3-bis[p-(dimethylamino)phenyl]-6-(dimethyl- amino)-	-1
5275	-----, 3,3-bis(2,4,6-trihydroxy- <u>m</u> -tolyl)-	51

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Oxygen		
3783	Phthalide, 3-ethylidene-	49
3382	-----, 3-phenyl-	45
3915	-----, 3-propylidene-	86
4166	Piperonal, diethyl acetal	43
4466	oxime	89
5383	Piperonyl alcohol, $\alpha$ -benzyl-, formate	100
6208	-----, $\alpha$ -tert-butyl-, pivalate	78
5202	-----, p-chlorobenzoate	-47
4009	Piperonyloin	-14
3079	Propane, 1-(2-biphenylyloxy)-2,3-epoxy-	64
4323	-----, 3-(2,4,5-trichlorophenoxy)-1,2-epoxy-	82
5315	1-Propanone, 1-(2-furyl)-	74
5310, 5800	-----, 1-(5-nitro-2-furyl)-	100, 98
3082	Propiophenone, 2,3-dibromo-4'-chloro-3-(3,4-methylene-dioxyphenyl)-	6
4801	2H-Pyran, 3,4-dihydro-2-isobutoxy-4-methyl-	20
4176	Pyran, 3-bromo-2-ethoxytetrahydro-	66
4174	-----, 3-bromotetrahydro-2-methoxy-	58
4175	-----, 3,4-dibromo-2-ethoxytetrahydro-	100
4167	Pyran-2-malonic acid, tetrahydro-, diethyl ester	35
5538	Pyran-2-methanol, tetrahydro-, carbanilate	75
6368	4H-Pyran-4-one, 2-benzoyl-3-hydroxy-6-(hydroxymethyl)-	13
5312, 5803	Pyridine, 2-(furfurylamino)-	86, 99
3806	-----, 2-[2-(furyl)vinyl]-	97
4011	Santonin	82
2803	Spiro[pseudoisoindole-1,9'-xanthen]-3(2H)-one,	-4
	3',6'-bis(diethylamino)-	
4364	Stilbene, 3,4-methylenedioxy-2',4'-dinitro-	18
3610	Styrene, 3,4-methylenedioxy- $\beta$ -nitro-	33
4252	-----, 2,4,6-trinitro-3-(5-nitro-2-furyl)-	91
6982	Succinic anhydride, x-dodecenyl-	64
6771	-----, p-methoxybenzyl-	-36
3246	Tartaric anhydride, diacetate	11
6797	diacetyl	37
3234	2,4,8,10-Tetraoxaspiro[5.5]undecane, 3,9-bis(trichloromethyl)-	9
4380	1,3,5,7-Tetroxocane, 2,6-bis(trichloromethyl)-	46
6391	$\sigma$ -Toluic acid, $\alpha$ -hydroxy-x-sulfo-, $\gamma$ -lactone copper(II) salt	60
4721	s-Triazine, 2,4-diamino-6-(2-furyl)-	98
5273	Umbelliferone, 3-benzyl-4-methyl-	70
3324, 7029	-----, 4-methyl-	42, 57
3940	Valeric acid, 5-hydroxy-4,4-dinitro-, $\delta$ -lactone	44
7190	Xanthone	25

TABLE I

Code No.	Classification and Name	K Value
HETEROCYCLIC COMPOUNDS		
Oxygen and Sulfur		
7088	5H-1,4-Benzoxathiepin, 2,3-dihydro-7-methyl-	57
7108	2H,6H-1,5-Benzoxathiocin, 3,8-dichloro-3,4-dihydro-	83
2842, 4217	Phenoxythiin	99,
2849, 4202	-----, 10-oxide	98
3616	-----, 10,10-dioxide	96, 99 80
Sulfur		
3928	Acrylic acid, $\beta$ -2-thienyl-	-58
7103	Carbamic acid, dimethyldithio-, 2-thienyl ester	96
5488	Carbonic acid, trithio-, cyclic ester with ethylene glycol	97
3026, 3562	Dibenzothiophene	54
3535	-----, 2-chloro-	58
3748	-----, x-chloro-	96
3536	-----, crude	91
3618	Hydroxylamine, N,N-di-2-thenyl-, hydrochloride	89
3573	Ketone, methyl 3-thianaphthetyl	95
3734	-----, methyl 2-thienyl	90
4740	Pseudoindolium compounds. 1,3,3-trimethyl-2-[2-[2-methylbenzothiazol-5(or 6)-yl]-amino]vinyl]-3H----- chloride	90
3743	Salicylic acid, 2-thenyl ester	59
7104	Sulfide, p-chlorobenzyl 2-thienyl	93
7073	Thianaphthene, 2-bromo-, 1,1-dioxide	86
3800	-----, 3-chloro-	86
7072	-----, 2,3-dibromo-2,3-dihydro-, 1,1-dioxide	92
3801	-----, 2,3-dichloro-	87
3563	-----, 2,3(?) -dichloro-	92
3795	-----, 1,1-dioxide	84
3577	-----, 3-nitro-	96
3803	-----, 2,3,x,x,x-pentachloro-	3
3802	-----, 2,3,x,x-tetrachloro-	38
3408	3-Thianaphthol, 6-chloro-4-methyl-	76
3843	Thiocyanic acid, 2-thenoylmethyl ester	83
3856	2-Thiophenecarboxaldehyde, semicarbazone	73
3842	Thiophene, 5-chloro-2-(1,2-dithiocyanatoethyl)-	55
3054	-----, 2,5-dibromo-	54
3841	-----, 2-(1,2-dibromoethyl)-5-chloro-	86
5527	-----, 2,5-dihydro-, 1,1-dioxide	85
5872	-----, 2,5-dihydro-3-methyl-, 1,1-dioxide	85
3817, 7154*	-----, 2-(2-nitrovinyl)-	91, 97

TABLE I

Code No.	Classification and Name	K Value
HYDRAZIDES		
Unsubstituted		
3256, 7191	Acetic acid, 2-phenylhydrazide	77, <u>94</u>
4388	-----, phenyl-, 2-phenylhydrazide	<u>100</u>
5751	Adipic acid, bis(2-phenylhydrazide)	<u>7</u>
4720	-----, dihydrazide	45
4962	Benzoic acid, cinnamylidenehydrazide	86
4960	-----, isopropylidenehydrazide	<u>99</u>
4546, 4961	-----, $\alpha$ -methylbenzylidenehydrazide	82, <u>89</u>
3992	Crotonic acid, hydrazide	<u>96</u>
4386	Isocaproic acid, 2-phenylhydrazide	<u>100</u>
7293	Maleic acid, dihydrazide	20
4409	Oxalic acid, bis(2-phenylhydrazide)	79
5124	-----, dihydrazide	79
4389	Stearic acid, 2-phenylhydrazide	55
Substituted		
5536	Acetic acid, cyano-, hydrazide	91
6701	Allophanic acid, 5-nitrofurfurylidenehydrazide	49
5000	p-Anisic acid, phenylhydrazide	<u>-40</u>
7101	Benzenesulfonic acid, isopropylidenehydrazide, <u>p,p'</u> -oxybis-	<u>87</u>
4883	Benzoic acid, 2,2'-dithiodi-, bis(2,4-dichlorobenzylidene- hydrazide)	19
4882	-----, dihydrochloride	90
4881	-----, o-mercapto-, 2,4-dichlorobenzylidenehydrazide	10
7033	-----, m-nitro-, hydrazide	93
4945	-----, p-nitro-, benzylidenehydrazide	<u>6</u>
4946	butylidenehydrazide	95
4950	sec-butylidenehydrazide	<u>88</u>
4956	o-chlorobenzylidenehydrazide	<u>55</u>
4957	cinnamylidenehydrazide	64
4759, 4955	cyclohexylidenehydrazide	98, <u>99</u>
4757, 4954	cyclopentylidenehydrazide	98, <u>95</u>
4760, 4958	2-ethylbutylidenehydrazide	<u>94</u> , <u>97</u>
4949	isopropylidenehydrazide	<u>66</u>
4764, 4947	$\alpha$ -methylbenzylidenehydrazide	86, <u>45</u>
4944	methylenehydrazide	<u>89</u>
4952	(1-methyl-3-oxobutylidene)hydrazide	70
4763, 4951	piperonylidenehydrazide	74, 0
4953	propylidenehydrazide	97
4959	2,2,2-trichloroethylidenehydrazide	<u>65</u>
4963	-----, piperonylidenehydrazide	89
4921	Hexanoic acid, 2-phenylhydrazido-	<u>96</u>

TABLE I

Code No.	Classification and Name	K Value
HYDRAZIDES		
Substituted		
6061	Isoniazid	80
4559	Isonicotinic acid, 2-chloro-, hydrazide	88
6097	Oxamic acid, allyl-, 2,2-dimethylhydrazide	92
5770	phenylhydrazide	99
5514	Phenaceturic acid, hydrazide	97
6046	1,4-Phthalazinedione, 2,3-dihydro-5-(p-nitrobenzamido)-	-2
5973	Phthalic acid, 3-nitro-, hydrazide	29
7161*	Picolinic acid, hydrazide	98
3613	Pyridinium compounds. 1-(carboxymethyl)----- chloride, hydrazide	100
HYDRAZINES AND DERIVATIVES		
Unsubstituted		
3719	Benzaldehyde, azine	17
7189	-----, phenylhydrazone	67
7039	Butyraldehyde, phenylhydrazone	98
7282	Formamide, 1,1'-azobis-	17
3360	Hydrazine, 4-biphenyl-, hydrochloride	87
5860	-----, 1,1-bis(2-ethylhexyl)-	79
5810	-----, butyl-, salt with 1 f. wt. oxalic acid	100
4396	-----, 1,2-dibenzoyl-	94
5858*	-----, 1,1-dibutyl-	94
5859*	-----, 1,1-dipentyl-	96
5806	-----, ethyl-, salt with 1 f. wt. oxalic acid	99
5808	-----, isopropyl-, salt with 1 f. wt. oxalic acid	97
3447	-----, 1-naphthyl-	95
3448	-----, 2-naphthyl-	46
5811	-----, pentyl-, salt with 1 f. wt. oxalic acid	99
4975	-----, phenyl-, hydrochloride	100
5809*	-----, propyl-, salt with 1 f. wt. oxalic acid	100
7279	1,2-Hydrazinedicarboxamide	54
4242	Hydrazobenzene	71
Substituted		
5796*	Acetic acid, hydrazino-, methyl ester, hydrochloride	95
3976	p-Anisaldehyde, (2-benzothiazolyl)hydrazone	71
3977	Benzaldehyde, p-acetamido-, (2-benzothiazolyl)hydrazone	-15
4547	-----, o-ethoxy-, 2-benzoxazolylhydrazone	23
4563	-----, p-ethylsulfonyl-, 2-benzoxazolylhydrazone	-7
3975	-----, p-hydroxy-, (6-nitro-2-benzothiazolyl)hydrazone	-52

TABLE I

Code No.	Classification and Name	K Value
HYDRAZINES AND DERIVATIVES		
Substituted		
5550	Benzenesulfonic acid, p-hydrazino-	58
3892, 7066	Benzothiazole, 2-hydrazino-	(T)
4374	Carbazic acid, 2-(2,5-dichlorophenyl)-, isopropyl ester	58
4552*	-----, dithio-, ammonium salt	97
4553	-----, methyl ester	(T)
5795	-----, 2-(2-hydroxyethyl)-, $\gamma$ -lactone, hydrochloride	97
5798	-----, 2-(2-hydroxypropyl)-, $\gamma$ -lactone, hydrochloride	95
4898	-----, 3-methyl-3-phenyl-, isopropyl ester	98
4914	-----, 3-phenyl-, 2-chloroethyl ester	52
4365, 5484	-----, isopropyl ester	96, 68
5554	-----, 3-(2,4,6-trichlorophenyl)-, isopropyl ester	90
4091	Cyclohexanone, 2,4-dinitrophenylhydrazone	74
4134	2-Furaldehyde, azine	97
4761	2-Heptanone, 2,2-dinitrophenylhydrazone	90
5807	Hydrazine, (2-aminoethyl)-, monooxalate	64
4548	-----, 1-(10-undecenoyl)-2-(4-pyridylcarbonyl)-	100
4976	Mesityl oxide, 2,4-dinitrophenylhydrazone	40
6711	Octadecanophenone, 2'-chloro-, 2,4-dinitrophenyl- hydrazone	-11
5289	Phosphorohydrazidic acid, 2-phenyl-, diethyl ester	74
6979	1,4-Phthalazinedione, 5-amino-2,3-dihydro-	42
5813	Propionitrile, 3-hydrazino-, monosulfate	89
5079	-----, 2,2'-hydrazonodi-	100
5841	3,6-Pyridazinedione, 4,5-dichloro-1,2-dihydro-	79
7294	-----, 1,2-dihydro-, 2,2'-iminodiethanol salt	22
7106	4H-1,2,4-Triazole, 4-amino-3-hydrazino-5-mercaptop-	96
6995	p-Urazine	20
HYDROCARBONS		
7201	Benzene, ethynyl-	57
3394	1,1'-Binaphthyl	-27
6275	Fluoranthene	-16
3395	Methane, (4-tert-butyl-2,6-dimethylcyclohexyl) (4-tert-butyl-2,6-xylyl)-	2
3368, 4200	-----, diphenyl-	97, 99
4157	-----, diphenyl-p-tolyl-	85
4566, 4647	Naphthalene, compound with 1,3,5-trinitrobenzene	100, 100
2894	-----, 1,6-dimethyl-	75
2896	-----, 2,3-dimethyl-	44
2895	-----, 2,6-dimethyl-	29
2897	-----, 2,7-dimethyl-	73
2898	-----, 2,3,6-trimethyl-	57
6276	Pyrene	-35

TABLE I

Code No.	Classification and Name	K Value
HYDROXY DERIVATIVES OF HETEROCYCLIC COMPOUNDS		
5280	Alloxanthin	33
5920	Butyric acid, 2,4-dihydroxy-3,3-dimethyl-, $\gamma$ -lactone	36
4863	d-Catechol	31
3603	Coumarin, 3-acetyl-4-hydroxy-	99
5270	-----, 5,7-dihydroxy-4-methyl-	45
7129	-----, 3,3'-thiobis[4-hydroxy-	64
4866	Flavanone, d-3,3,4,5,7-pentahydroxy-	28
2910	Hydrouracil, 6-imino-5-isoxitroso-	-35
4492	Isonicotinic acid, 2,6-dihydroxy-	49
3711	Maltol	28
5389	Naringenin	34
6063	2-Phenazinol, 8-amino-7-methyl-	20
6305	3-Piperidinol, 1-ethyl-, hydrochloride	28
6368	4H-Pyran-4-one, 2-benzoyl-3-hydroxy-6-(hydroxymethyl)-	13
5325	3,6-Pyridazinediol, 4-methyl-	18
3889	2-Pyridinol	87
6626	2H-Pyrido[1,2a]pyrimidin-3-ol, 3,4-dihydro-, mono-hydrochloride	72
3133, 7221	4-Pyrimidinol, 2,6-diamino-5-nitroso-	-9, -48
6036	2-Pyrimidinol, 4,6-dimethyl-, complex with 1 f. wt. 4,4'-dinitrocarbanilide	45
5996	3-Quinolinecarboxylic acid, 7-chloro-4-hydroxy-	59
3984	-----, 8-chloro-4-hydroxy-7-methyl-, ethyl ester	28
4119	4-Quinolinol, 5-chloro-	94
2886	8-Quinolinol phosphate	86
2887, 3733	salt with 1 f. wt. benzoic acid	75, 69
3633	salt with 1 f. wt. maleic acid	63
3731	salt with 1 f. wt. salicylic acid	63
3625	sulfate	95
3474	-----, 5,7-dibromo-	61
3051	-----, 5,7-dichloro-, copper(II) derivative	15
6776	-----, 5,7-dinitro-	34
3478	Tartaric anhydride, diacetyl-	81
6797	3-Thianaphthenol, 6-chloro-4-methyl-	37
3408	2-Thiazolol, 4-methyl-	76
4558	Umbelliferone, 3-benzyl-4-methyl-	86
5273	-----, 4-methyl-	70
3324, 7029		42, 57
HYDROXYLAMINES AND DERIVATIVES		
Unsubstituted		
7030	3-Butanone, 1-phenyl-, oxime	74
7026	Dibenzyl ketone, oxime	49

TABLE I

Code No.	Classification and Name	K Value
HYDROXYLAMINES AND DERIVATIVES		
Unsubstituted		
7199	Glyoxime, dimethyl-	89
7186	$\alpha$ -Glyoxime, diphenyl-	65
7027	3-Pentanone, 1,5-diphenyl-, oxime	66
5517	1(2H)-Phenanthrone, 3,4-dihydro-, oxime	67
6015	1,2-Propanedione, 1-phenyl-, dioxime	54
7025	Propiophenone, 3-phenyl-, oxime	55
Substituted		
4119	Acetoacetic acid, 2-(2,2,2-trichloro-1-hydroxyaminoethyl)-, ethyl ester	45
6268	Acetone, O-(p-chlorophenylcarbamoyl)oxime	81
5909	-----, O-(phenylcarbamoyl)oxime	65
6249	-----, O-(m-tolylcarbamoyl)oxime	54
6322	-----, O-(2,5-dichlorophenylcarbamoyl)oxime	31
4234	Acetophenone, p-chloro-, oxime	83
3886	p-Anisaldehyde, oxime	81
4472	Benzaldehyde, 3,4-dichloro-, O-(3,4-dichlorobenzyl)oxime	52
7046	$\alpha$ -Benzil, monooxime	93
7045	Benzoin, anti-oxime	98
6228	2,3-Butanedione, monooxime	32
6306	-----, O-(phenylcarbamoyl)monooxime	3
2986	2-Butanone, 3,3'-(ethylenedinitrilo)di-, dioxime, iron(II) complex	-32
2987	-----, O-(phenylcarbamoyl)oxime	40
6250	-----, 3,3'-(o-phenylenedinitrilo)di-, dioxime	61
2988	Caproic acid, $\alpha$ -oxo-, oxime, ethyl ester	61
3263	Cyclohexanone, O-(phenylcarbamoyl)oxime	86
6252	2-Furaldehyde, oxime	-10
7032	-----, 5-nitro-, anti-oxime	89
5799	Hydouracil, 6-imino-5-isonitroso-	89
2910	Hydroxylamine, N,N-di-2-thenyl-, hydrochloride	-35
3618	3-Pentanone, O-(phenylcarbamoyl)oxime	89
6307	Piperonal, oxime	77
4466	Propionaldehyde, 2-(dimethylamino)-2-methyl-, oxime	89
5876	Pyruvic acid, (4-hydroxy-3-methoxyphenyl)-, oxime	98
5908	Salicylaldehyde, 3,5-dichloro-, oxime	27
4261	-----, oxime	94
7044		98

TABLE I

Code No.	Classification and Name	K Value
IMIDES		
Unsubstituted		
5844	Bicyclo[2.2.1]hept-5-ene-2,3-dicarboximide, <u>N</u> -ethyl-	79
5851	-----, N-(2-ethylhexyl)-	83
2962	-----, <u>N</u> -pentyl-	78
3061	Citraconimide	98
2952	-----, N-phenyl-	94
2954	-----, <u>N</u> -p-tolyl-	97
2949	Glutarimide	20
2941	-----, N-ethyl-	72
2950	-----, <u>N</u> -phenyl-	63
6272	Homophthalimide, <u>N</u> -phenyl-	16
3062	Itaconimide	85
3170, 6733*	Maleimide	99, <u>100</u>
4811, 5113	-----, N-butyl-	<u>100</u> , <u>100</u>
2968	-----, <u>N</u> -dodecyl-	87
3113	-----, N-ethyl-	79
6734	-----, N-isopropyl-	83
3112, 4326	-----, <u>N</u> -methyl-	100, <u>100</u>
3786, 6735*	-----, <u>N</u> -phenyl-	81, <u>98</u>
6736	-----, N,N'-(1,3-phenylene)bis-	76
3810, 5840	-----, <u>N</u> -o-tolyl-	92, <u>98</u>
2965	-----, <u>N</u> -p-tolyl-	51
3708	Phthalimide	30
2948	-----, N-allyl-	94
3346	-----, <u>N</u> -benzyl-	48
3260, 4861	-----, <u>N</u> -butyl-	85, <u>97</u>
2963	-----, <u>N</u> -decyl-	83
2925	-----, <u>N</u> -dodecyl-	-17
2928, 4384	-----, N-ethyl-	54, <u>90</u>
5976	-----, N,N'-ethylenebis-	52
3114	-----, N-hexyl-	90
2960	-----, N-isobutyl-	97
2947, 4385	-----, N-isopropyl-	77, <u>100</u>
2927	-----, N-methyl-	62
5974	-----, N-(1-methylheptyl)-	41
5392	-----, N-(1-naphthyl)-	50
3606	-----, N-(2-naphthyl)-	45
2924, 4359	-----, N-octyl-	65, <u>88</u>
2967	-----, <u>N</u> -pentyl-	95
3258	-----, <u>N</u> -phenyl-	-6
2923	-----, <u>N</u> -propyl-	71
5843	-----, 1,2,3,6-tetrahydro-, <u>N</u> -ethyl-	89
2962, 5530	-----, N-m-tolyl-	-277, <u>64</u>
2961, 3607	-----, <u>N</u> -o-tolyl-	50, <u>54</u>
2926	-----, <u>N</u> -p-tolyl-	-9

TABLE I

Code No.	Classification and Name	K Value
IMIDES		
Unsubstituted		
6333	Pyromellitic acid, diimide, <u>N,N'</u> -diallyl-	39
6343	-----, diimide, <u>N,N'</u> -dibenzyl-	-85
6334	-----, diimide, <u>N,N'</u> -dibutyl-	-1
6336	-----, diimide, <u>N,N'</u> -di-sec-butyl-	35
6337	-----, diimide, <u>N,N'</u> -di-tert-butyl-	25
6330	-----, diimide, <u>N,N'</u> -diethyl-	38
6351	-----, diimide, <u>N,N'</u> -di(2-ethylhexyl)-	-19
6341	-----, diimide, <u>N,N'</u> -diheptyl-	-17
6340	-----, diimide, <u>N,N'</u> -dihexyl-	-13
6335	-----, diimide, <u>N,N'</u> -diisobutyl-	-143
6332	-----, diimide, <u>N,N'</u> -diisopropyl-	37
6325	-----, diimide, <u>N,N'</u> -dimethyl-	63
6338	-----, diimide, <u>N,N'</u> -di(l-methylbutyl)-	0
6342	-----, diimide, <u>N,N'</u> -dioctyl-	-59
6339	-----, diimide, <u>N,N'</u> -dipentyl-	-18
6326	-----, diimide, <u>N,N'</u> -diphenyl-	8
6331	-----, diimide, <u>N,N'</u> -dipropyl-	22
6327	-----, diimide, <u>N,N'</u> -di-m-tolyl-	1
6328	-----, diimide, <u>N,N'</u> -di-o-tolyl-	-39
6329	-----, diimide, <u>N,N'</u> -di-p-tolyl-	10
2946	Succinimide, <u>N</u> -allyl-	71
5683	-----, 2-benzyl-3,3-dimethyl-	79
2955	-----, 2, <u>N</u> -dimethyl-	18
2943	-----, <u>N</u> -ethyl-	0
5682	-----, <u>N</u> -(2-ethylhexyl)-2-methyl-	76
2956	-----, <u>N</u> -ethyl-2-methyl-	52
3115	-----, <u>N</u> -hexyl-	48
2966	-----, <u>N</u> -isobutyl-	14
2944	-----, <u>N</u> -isopropyl-	-3
2942	-----, <u>N</u> -methyl-	-68
2969, 5681	-----, 2-methyl-	49, 49
2958	-----, 2-methyl- <u>N</u> -phenyl-	27
2957	-----, 2-methyl- <u>N</u> -propyl-	23
2959, 3116	-----, 2-methyl- <u>N</u> -p-tolyl-	45, 11
2945	-----, <u>N</u> -propyl-	35
5693, 5922	-----, 2,2,3,3-tetramethyl-	100, 100
5121, 5684	-----, <u>N</u> -vinyl-	<u>88, 77</u>
Monosubstituted		
Acids		
2935	Acetic acid, (1,4-methano-1,2,3,4-tetrahydro-phthalimido)-	67

TABLE I

Code No.	Classification and Name	K Value
IMIDES		
Monosubstituted		
Acids		
5979	Butyric acid, 4-phthalimido-	83
6449	Levopimaric acid, addition product with <u>N</u> -phenylmaleimide	-42
Alcohols		
6738*	Maleimide, <u>N</u> -hydroxymethyl-	99
2257	Phthalimide, <u>N</u> -2-hydroxyethyl-	46
6050	-----, <u>N</u> -(3-hydroxy-4-hexenyl)-	76
5987	-----, <u>N</u> -(3-hydroxy-3-methylbutyl)-	76
6049	-----, <u>N</u> -(3-hydroxy-3-methylpentyl)-	71
Amides		
4827	Acrylamide, <u>N</u> -(phthalimidomethyl)-	61
6741	Maleimide, <u>N</u> - <i>tert</i> -butylcarbamoyl-	65
6740	-----, <u>N</u> -carbamoyl-	87
4817	Phthalimide, 4-acetamido-	56
7099	Succinimide, <u>N</u> -carbamoyl-	42
Amines		
5768	Maleimide, <u>N</u> -anilino-	68
4818	Phthalimide, o-amino-	66
6478	-----, <u>N</u> -(5-amino-2-methylbenzyl)-	20
5262	-----, <u>N</u> -(anilinomethyl)-	60
5266	-----, <u>N</u> -[(4-biphenylamino)methyl]-	32
5260	-----, <u>N</u> -(m-toluidinomethyl)-	16
5263	-----, <u>N</u> -(2,4-xylidinomethyl)-	88
5267	-----, <u>N</u> -(2,5-xylidinomethyl)-	70
4824	Succinimide, $\alpha$ -anilino- <u>N</u> -phenyl-	-4
Esters		
7009	Maleimide, <u>N</u> -acetoxymethyl-	95
6737*	-----, <u>N</u> -propionyloxymethyl-	98
4731	Phthalimide, <u>N</u> -2-hydroxyethyl-, oleate	8
4732	stearate	-116
5108	Succinimide, <u>N</u> -(2-acetoxyethyl)-	50
4730	-----, <u>N</u> -(2-hydroxy-1,1-dimethylethyl)-, oleate	66
Ethers		
6357	Pyromellitic acid, diimide, <u>N,N'</u> -bis( <i>m</i> -ethoxyphenyl)-	-7
6358, 6359	-----, diimide, <u>N,N'</u> -bis( <i>p</i> -ethoxyphenyl)-	39, -16
6355	-----, diimide, <u>N,N'</u> -bis( <i>m</i> -methoxyphenyl)-	-36
6354	-----, diimide, <u>N,N'</u> -bis( <i>o</i> -methoxyphenyl)-	-11
6356	-----, diimide, <u>N,N'</u> -bis( <i>p</i> -methoxyphenyl)-	-59

TABLE I

Code No.	Classification and Name	K Value
IMIDES		
Monosubstituted		
Halides		
5845	Bicyclo[2.2.1]hept-5-ene-2,3-dicarboximide, 1,4,5,6,7,7-hexachloro-N-ethyl-	74
2934	Bicyclo[2.2.1]hept-2-ene-5,6-dicarboximide, 1,2,3,4,7,7-hexachloro-N-pentyl-	-65
5823	Maleimide, N-allyl-2,3-dichloro-	100
5833	-----, N-benzyl-2,3-dichloro-	55
3808	-----, N-(m-chlorophenyl)-	73
3807	-----, N-(o-chlorophenyl)-	80
3809	-----, N-(p-chlorophenyl)-	84
5835	-----, 2,3-dichloro-N-cyclohexyl-	56
5829	-----, 2,3-dichloro-N-decyl-	89
5825	-----, 2,3-dichloro-N-ethyl-	100
5831	-----, 2,3-dichloro-N-(2-ethylhexyl)-	92
5828	-----, 2,3-dichloro-N-hexyl-	98
5827	-----, 2,3-dichloro-N-isobutyl-	100
5824	-----, 2,3-dichloro-N-methyl-	100
5834	-----, 2,3-dichloro-N-phenethyl-	33
5453	-----, 2,3-dichloro-N-phenyl-	24
5826	-----, 2,3-dichloro-N-propyl-	98
5837	-----, 2,3-dichloro-N-(m-tolyl)-	19
5836	-----, 2,3-dichloro-N-(o-tolyl)-	77
5838	-----, 2,3-dichloro-N-(p-tolyl)-	51
5687	Phthalimide, N-[bis(p-chlorophenyl)methyl]-	65
5338, 5975	-----, N-(2-bromoethyl)-	59, 84
7058	-----, x-(2-bromoethyl)-	93
3722	-----, N-(3-bromopropyl)-	70
4412	-----, N-(m-chlorophenyl)-	26
5686	-----, tetrachloro-	95
6345	Pyromellitic acid, diimide, N,N'-bis(m-chlorophenyl)-	-43
6344	-----, diimide, N,N'-bis(o-chlorophenyl)-	-102
6346	-----, diimide, N,N'-bis(p-chlorophenyl)-	-12
6350	-----, diimide, N,N'-bis(3-chloro-2-tolyl)-	-61
7087	Succinimide, 2-chloro-3-(x-chlorophenyl)-N-phenyl-	58
3226	-----, 2-chloro-N-phenyl-	86
Heterocyclic Compounds		
5846	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboximide, N-ethyl-	54
5879	-----, N-1-naphthyl-	32
6424	Phthalimide, N-(3-methylpyrid-2-yl)-	91
6433	-----, N-(6-methylpyrid-2-yl)-	77
5259	-----, N-(morpholinomethyl)-	69

TABLE I

Code No.	Classification and Name	K Value
IMIDES		
Monosubstituted		
	Heterocyclic Compounds	
6348	Pyromellitic acid, diimide, <u>N,N'</u> -bis(3-methylpyrid-2-yl)-	98
6349	-----, diimide, <u>N,N'</u> -bis(6-methylpyrid-2-yl)-	75
6347	-----, diimide, <u>N,N'</u> -di(2-pyridyl)-	-52
	Ketones	
5424	Phthalimide, <u>N</u> -(9-oxofluoren-2-yl)-	-17
4306	-----, <u>N</u> -phenacyl-	21
	Nitro Compounds	
6051	Phthalimide, <u>N</u> -butyl-3-nitro-	84
6324	-----, <u>N</u> -dodecyl-4-nitro-	98
5980	-----, <u>N</u> -ethyl-3-nitro-	87
5985	-----, <u>N</u> -hexyl-3-nitro-	49
6055	-----, <u>N</u> -hexyl-4-nitro-	58
6045	-----, <u>N</u> -isobutyl-3-nitro-	55
5983	-----, <u>N</u> -isopropyl-3-nitro-	81
5981	-----, <u>N</u> -methyl-3-nitro-	72
6274	-----, 4-nitro-	87
5984	-----, 3-nitro- <u>N</u> -octyl-	59
6056	-----, 4-nitro- <u>N</u> -octyl-	94
5986	-----, 3-nitro- <u>N</u> -pentyl-	93
6052	-----, 3-nitro- <u>N</u> -phenethyl-	66
4387	-----, <u>N</u> -( <i>m</i> -nitrophenyl)-	63
6048	-----, 3-nitro- <u>N</u> -(2-phthalimidocethyl)-	-59
6054	-----, 4-nitro- <u>N</u> -(2-phthalimidoethyl)-	36
5982	-----, 3-nitro- <u>N</u> -propyl-	93
	Phenols	
5394	Bicyclo[2.2.1]hept-5-ene-2,3-dicarboximide, <u>N</u> -( <i>o</i> -hydroxyphenyl)-	81
5529	Phthalimide, <u>N</u> -( <i>o</i> -hydroxyphenyl)-	44
	Miscellaneous	
6763	Carbamic acid, thiol-, maleimidomethyl-, butyl ester	99
7102	Isocyanuric acid, triphenyl-	88
6764	Maleimide, <u>N</u> -benzylideneamino-	73
6759*	-----, <u>N</u> -thiocyanatomethyl-	99
5977	Phthalimide, <u>N</u> -(3-cyanopropyl)-	80
	Polysubstituted	
3459	Isocyanuric acid, trichloro-	97

TABLE I

Code No.	Classification and Name	K Value
IMIDES		
Polysubstituted		
5832	Maleimide, N-(2-acetamidoethyl)-2,3-dichloro-	95
5830	-----, 2,3-dichloro-N-(2-methoxyethyl)-	97
5327	Maleinimide, N-m-[bis(2-hydroxyethyl)amino]phenyl-	-3
5265	Phthalimide, N-[ <u>m</u> -bromoanilino)methyl]-	38
6047	-----, N-(2-bromoethyl)-3-nitro-	87
6053	-----, N-(2-bromoethyl)-4-nitro-	82
6057	-----, N-(o-chlorobenzyl)-4-nitro-	100
6058	-----, N-(p-chlorobenzyl)-4-nitro-	87
5261	-----, N-[ <u>p</u> -ethoxyanilino)methyl]-	-7
5264	-----, N-[ <u>p</u> -iodoanilino)methyl]-	37
5268	-----, N-[ <u>p</u> -methoxyanilino)methyl]-	71
5269	-----, N-[ <u>p</u> -(methylcarbamoyl)anilinomethyl]-	74
6271	-----, 3,4,5,6-tetrachloro-N-[2-(diethylamino)ethyl]-	43
3712	-----, 1,2,3,6-tetrahydro-, N-trichloromethylthio-	57
6762	Succinimide, $\alpha$ -acetoxythio-N-carbamoyl-x-pentyl-	64
IMINES		
Unsubstituted		
6234, 7176	Aniline, N-benzylidene-	63, 83
5034	-----, N-fluoren-9-ylidene-	75
5928	Butylamine, N-benzylidene-1,1,3,3-tetramethyl-	96
7175	Hydrobenzamide	48
3973	Propenylamine, N-isobutylidene-2-methyl-	45
Substituted		
5029	Acetamide, N-(9-phenyliminofluoren-2-yl)-	63
4360	Acetophenone, 2-[ <u>p</u> -(dimethylamino)phenylimino]-2-phenyl-	74
5031	p-Acetotoluidide, $\alpha$ -(2-fluorenylimino)-	40
3895	Aniline, N-benzylidene- <u>m</u> -nitro-	88
6255	-----, N-(2,4-dichlorobenzylidene)-	42
3893	-----, N-( <u>m</u> -nitrobenzylidene)-	66
6775	2,2'-Binaphthalene-1,1',6,6',7,7'-hexol, 8,8'-bis(hexyl-imino)methyl-5,5'-diisopropyl-3,3'-dimethyl-	-11
2987	2-Butanone, 3,3'-(ethylenedinitrilo)di-, dioxime, iron(II) complex	40
2984	<u>o</u> -Cresol, $\alpha$ -( <u>p</u> -ethoxyphenylimino)-	24
4982	-----, $\alpha$ -( <u>o</u> -hydroxyphenylimino)-	81
2983	-----, $\alpha$ -phenylimino-	88
4557	Cyclopentanecarbonitrile, 2-imino-3,3-diphenyl-	84
5543	1,3-Cyclopentanedicarboxylic acid, 4-(phenylimino)-5-oxo-, diethyl ester	41

TABLE I

Code No.	Classification and Name	K Value
IMINES		
Substituted		
6040	2-Fluorenamine, <u>N</u> -[ <u>p</u> -(dimethylamino)benzylidene]-	53
6035	-----, <u>N</u> -( <u>p</u> -nitrobenzylidene)-	59
2910	Hydrouracil, 6-imino-5-isonitroso-	-35
6764	Maleimide, <u>N</u> -benzylideneamino-	73
5510	1,4-Naphthoquinone imine, 2-amino-, monohydrochloride	100
4424, 4981	Phenol, <u>o</u> -benzylideneamino-	75, 83
4983	-----, <u>o</u> -[ <u>(o</u> -chlorobenzylidene)amino]-	67
4985	-----, <u>o</u> -[ <u>(p</u> -chlorobenzylidene)amino]-	71
4984	-----, <u>o</u> -[ <u>(p</u> -methoxybenzylidene)amino]-	72
4315	<u>p</u> -Phenylenediamine, <u>N</u> -benzylidene-	98
5032	-----, <u>N,N'</u> -bis(2,7-dinitrofluoren-9-ylidene)-	52
5038	-----, <u>N,N'</u> -bis(2-nitrofluoren-9-ylidene)-	51
6041	Quinoline, 2-(2-fluorenyliminomethyl)-	54
6069	Quinolinium compounds. 4-chloro-2-[ <u>p</u> -(dimethylamino)phenyliminomethyl]-6-methoxy-1-methyl----- chloride	89
INORGANIC COMPOUNDS		
2755	Aluminum chloride hydroxide, complex	47
3462	Ammonium pyrophosphate, $(\text{NH}_4)_4\text{P}_2\text{O}_7$	75
3461	Ammonium pyrophosphate, $(\text{NH}_4)_2\text{H}_2\text{P}_2\text{O}_7$	59
4196	Barium bromide	33
6992	Boron oxide, $\text{B}_2\text{O}_3$	42
6991	Lithium hydroxide, monohydrate	74
4199	Magnesium bromide	24
6981	Molybdenum oxide, $\text{MoO}_3$	(T)
3278	Nickel tungstate(VI), $\text{NiWO}_4$	-20
3277	Nickel sulfamate	37
6993	Sodium borate, decahydrate, $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$	(T)
6980	Sodium molybdate(VI), $\text{Na}_2\text{MoO}_4$	25
IODONIUM COMPOUNDS		
3120	Bismuthine, triphenyl-, triiodium chloride Iodinium compounds.	83
3429	bis(acetamidophenyl)----- chloride	(T)
3123	bis(acetoacetamidophenyl)----- iodide	83
3545	bis(acetophenyl)----- iodide	71
3544	bis(acetoureidophenyl)----- iodide	69
3432	bis(aminophenyl)----- iodide	52
2861	bis(2-bromo-4-chlorophenyl)----- chloride	88
2862	bis(2-bromo-4-chlorophenyl)----- iodide	91
2863	bis(2-bromo-4-chlorophenyl)----- sulfate	87

TABLE I

Code No.	Classification and Name	K Value
IODONIUM COMPOUNDS		
Iodonium compounds.		
2870	bis(p-bromophenyl)----- chloride	92
2871	bis(p-bromophenyl)----- iodide	65
2872	bis(p-bromophenyl)----- sulfate	73
3431	bis(tert-butylphenyl)----- chloride	93
3430	bis(carboxymethylphenyl)----- iodide	88
3543	bis(carboxyphenyl)----- iodide	(T)
2864	bis(2,4-dichlorophenyl)----- chloride	82
2865	bis(2,4-dichlorophenyl)----- iodide	90
2866	bis(2,4-dichlorophenyl)----- sulfate	79
2867	bis(3,4-dichlorophenyl)----- chloride	87
2868	bis(3,4-dichlorophenyl)----- iodide	88
2869	bis(3,4-dichlorophenyl)----- sulfate	83
2873	bis(p-fluorophenyl)----- chloride	100
2874	bis(p-fluorophenyl)----- iodide	(T)
3546	bis(lauramidophenyl)----- iodide	20
3428	bis(methylphenyl)----- chloride	91
3427	bis(tert-pentyl)----- chloride	89
3542	diphenyl----- chloride	80
IRON COMPOUNDS		
2987	2-Butanone, 3,3'-(ethylenedinitriolo)di iron(II) complex	dioxime, 40
5214	Iron, dicyclopentadienyl-	90
ISOCYANATES		
6986	3,3'-Bitolyl, 4,4'-diisocyanato-	-16
3741	Isocyanic acid, 2-biphenyl ester	27
7074	dihydroabietyl ester	91
6739	isopropyl ester	87
6987	4,4'-methylenebisphenyl ester	46
6985	Toluene, 2,4-diisocyanato-	5
6984	-----, 2,4-(and 2,6-)diisocyanato, 80/40 mixture	34
6983	65/35 mixture	26
KETONES		
Unsubstituted		
Monoketones		
3914	Anthrone, 10-methylene-	75
7177, 7197	Benzophenone	99, 99
4138, 6000	3-Buten-2-one, 4-phenyl-	75, 73
6977	Carvone	93

TABLE I

Code No.	Classification and Name	K Value
KETONES		
Unsubstituted		
Monoketones		
4303	Chalcone, 4-methyl-	49
3404	-----, 2',4',6'-trimethyl-	84
7023	Cyclohexanone	15
7024	-----, 4-methyl-	39
4171	2-Cyclohexen-1-one, 3-(4-biphenyl)-	-19
4168	-----, 3-p-tolyl-	79
4542	Cyclopentanone, 2,2-diphenyl-	63
5999	2,4-Pentadienophenone, 5-phenyl-	62
7203	Pantanophenone	94
6004	2-Propanone, 1,3-diphenyl-	74
3010	Pulegone	99
3894	12-Tricosanone	11
5398	d-cis-Verbanone	47
5400	l-cis-Verbanone	47
5399	dl-cis-Verbanone	58
5220	d-Verbenone	51
Polyketones		
3884	1,3-Butanedione, 2-butyl-1-phenyl-	93
6001	-----, 1-phenyl-	50
3078	2-Butene-1,4-dione, 4-(4-biphenyl)-1,2-diphenyl-	25
3383	-----, trans-1,4-diphenyl-	2
3426	Camphorquinone	60
6093	1,3-Cyclobutanedione, tetramethyl-	15
4160, 6997	1,3-Cyclohexanedione, 5,5-dimethyl-	39, 42
3076	Cyclohexanone, 2-( $\alpha$ -phenacylbenzyl)-	55
3075	Cyclohexene, 4,5-dibenzoyl-	41
3077	-----, 4,5-dibenzoyl-2-phenyl-	49
3073	Cyclopentanone, 2-( $\alpha$ -phenacylbenzyl)-	69
2905	Cyclopropane, 1,2-dibenzoyl-3-phenyl-	-63
3942	2,4-Hexanedione, copper(II) derivative	86
5523	nickel(II) derivative	79
3883	-----, 5,5-dimethyl-	32
4148	1,3-Indandione, 2-cyclopropyl-, potassium derivative	81
4147	-----, 2-propionyl-, sodium derivative	98
3880	2,4-Nonanedione	19
3066	2,4-Pantanedione, nickel(II) derivative	80
3896	1,3-Propanedione, 1,3-diphenyl-	56
3935	1,3,5-Triacetylbenzene	70

TABLE I

Code No.	Classification and Name	K Value
KETONES		
Monosubstituted		
Acids		
3638	Acrylic acid, <i>trans</i> - $\beta$ -benzoyl-	79
3402	Benzoic acid, $\alpha$ -( $\beta$ -isodurylyl)-	38
5405	Elaidic acid, 12-oxo-	34
3286	Levulinic acid, nickel(II) salt	12
5407	Octadecanoic acid, 9,12-dioxo-	20
5406	10-Octadecenoic acid, 12-oxo-	41
5403	-----, 9,12-dioxo-	20
5402	9-Octadecenoic acid, 12-oxo-	54
4103	Pinonic acid	53
2903	Propionic acid, $\beta$ -( $\beta$ -isodurylyl)-	27
Alcohols		
6005	Acetophenone, 2-hydroxy-	65
7200	Adipoin	75
5494	2-Butanone, 3-hydroxy-3-methyl-	-23
4165	Cyclohexanone, 3-hydroxy-3-phenyl-	78
5272	-----, 2,2,6,6-tetrakis(hydroxymethyl)-	48
Amides		
5416	Acetamide, $N$ -(9-oxo-2-fluorenyl)-	93
4241	-----, 2-phenyl- $N$ -( $\alpha$ -phenylphenacyl)-	-48
4840*, 6130	Acetanilide, 3'-acetyl-	91, 71
6120	-----, 4'-acetyl-	76
6105	-----, 4'-benzoyl-	82
5342	Acetoacetamide, $N,N'$ -ethylenebis-	-25
5348	-----, $N,N'$ -(4-methylphenylene)bis-	88
4014	Acetoacetanilide	28
5926	-----, 4',4"-methylenebis-	78
5953A	-----, 2'-phenyl-	60
5422	Benzamide, $N$ -(9-oxo-2-fluorenyl)-	-54
4240	-----, $N$ -( $\alpha$ -phenylphenacyl)-	-173
3611	Isatin, 1-acetyl-	17
3196	Levulinamide, $N,N$ -diethyl-	62
6108	Propionanilide, 4'-acetyl-	85
6115	-----, 4'-benzoyl-	65
Amines		
7194	Acetophenone, 4'-amino-	94
5393	Benzophenone, 4,4'-diamino-	91
3265	d-Camphor, 3-amino-, monosulfate	42
4309	Chalcone, 4-(dimethylamino)-	78
6027	9-Fluorenone, 2-amino-	79
5414	-----, 2-(methylamino)-	89

TABLE I

Code No.	Classification and Name	K Value
KETONES		
Monosubstituted		
Amines		
6446	2-Pentanone, 4-ethyl-3-(dimethylamino)-	77
3455	2-Pentenophenone, 3-amino-	79
3881	2-Propanone, 1-diethylamino-	33
6541	1-Propanone, 1-(7-isopropyl-1-methyl-3-phenanthryl)- 2-(dipentylamino)-, hydrochloride	45
5353	2'-Propionaphthone, 3-(dimethylamino)-, hydrochloride	63
3134	Propiophenone, 4'-amino-	<u>93</u>
Esters		
5106	Acetoacetic acid, allyl ester	90
4884	1,3-Cyclopentanedicarboxylic acid, 4,5-dioxo-, diethyl ester	57
2907	Hydratropic acid, $\beta$ -(4-biphenylylcarbonyl)-, methyl ester	50
3311	Pimelic acid, $\gamma$ -oxo-, dibutyl ester	31
3308	didodecyl ester	-58
3310	diethyl ester	42
3309	dimethyl ester	24
6439	Pinonic acid, dodecyl ester	-20
Ethers		
6003	3-Buten-2-one, 4-(p-methoxyphenyl)-	50
5274	Chalcone, $\alpha$ -ethyl-4,4'-dimethoxy-	98
2735	-----, 2-methoxy-	67
3074	-----, 4'-methoxy-	28
4164	2-Cyclohexen-1-one, 3-ethoxy-5,5-dimethyl-	64
4358	Cyclopentanone, 2,5-bis(p-methoxybenzylidene)-	32
5524	Propiophenone, 3',4'-dimethoxy-	83
4170	-----, 4'-methoxy-3-phenyl-	8
Halides		
7098	Acetophenone, 2,2,4'-trichloro-	73
7124	-----, m-trichloromethyl-	68
2845, 4219	Benzophenone, 4-chloro-	<u>91</u> , 77
4203	Camphor, $\alpha$ -bromo-	67
4173	Chalcone, 4-chloro-	30
2843	2,5-Cyclohexadien-1-one, hexachloro-	(T)
4177	2-Cyclohexen-1-one, 3-(m-chlorophenyl)-	63
4888, 4948	-----, 2,3,4,4,5,6-heptachloro-	84, 97
4378	1,3-Indanedione, 2-chloro-2-isovaleryl-	47
4377	-----, x,x-dichloro-2-propionyl-	53
3793, 4111	4,7-Methanoindene-1,8-dione, 2,3,3a,4,5,6,7,7a-octachloro-3a,4,7,7a-tetrahydro-	72, 64

TABLE I

Code No.	Classification and Name	K Value
KETONES		
Monosubstituted		
	Halides	
6010	Propiophenone, 4'-chloro-	56
Heterocyclic Compounds		
6834, 7035	Acetone, furfurylidene-	97, 99
5854	-----, piperonylidene-	50
6363, 7028	Acrylophenone, 3-(2-furyl)-	69, 96
7120	Benzimidazole, 2-(2-benzoylethyl)-	65
2734	Chalcone, 3,4-methylenedioxy-	35
5415	1,4-Cyclohexanedione, 2,5-dimorpholino-	45
5496	3(2H)-Furanone, dihydro-2,2,5,5-tetramethyl-	44
3629	Furil	(T)
5855	2-Heptanone, 1-piperonylidene-	56
4162	5H-Indeno[5,6-d]-1,3-dioxol-5-one, 6,7-dihydro-	78
5314, 5776	Ketone, 2-furyl methyl	45, 81
5318	-----, 2-furyl phenyl	99
3573	-----, methyl 3-thianaphthetyl	95
3734	-----, methyl 2-thienyl	90
5315	1-Propanone, 1-(2-furyl)-	74
6284	Propiophenone, 3-phenyl-3-piperidino-	81
7190	Xanthone	95
Hydroxylamine Derivatives		
7046	$\alpha$ -Benzil, monooxime	93
6228	2,3-Butanedione, monooxime	32
6306	$\text{O}$ -phenylcarbamoyl derivative	3
Imides		
5424	Phthalimide, N-(9-oxofluoren-2-yl)-	-17
4306	-----, N-phenacyl-	21
Lactams		
3674	Isatin	44
3414	-----, 7-methyl-	81
Lactones		
4862	Acetoacetic acid, 2-(2-hydroxyethyl)-, $\gamma$ -lactone	47
2906	Butyric acid, 4-benzoyl-4-hydroxy-2,3-diphenyl-, $\gamma$ -lactone	-27
5161	Heptanoic acid, 3-(1-hydroxy-1-methyl)-6-oxo-, $\gamma$ -lactone	60
4011	Santonin	82

TABLE I

Code No.	Classification and Name	K Value
KETONES		
Monosubstituted		
Nitriles		
6012	Acetonitrile, benzoyl-	71
4549	1,1,3,3-Cyclohexanetetrapropionitrile, 2-oxo-	40
4406	1,1,3,3-Cyclopantanetetrapropionitrile, 2-oxo-	26
3617	Heptanedinitrile, 4-acetyl-4-(2-cyanoethyl)-	17
3608	-----, 4-acetyl-4-methyl-	98
3716	-----, 4-acetyl-4-phenyl-	70
4890	-----, 4-benzoyl-4-(2-cyanoethyl)-	47
4410	-----, 4-benzoyl-4-methyl-	91
5756	Pantanenitrile, 4-methyl-3-oxo-	65
3890	-----, 3-oxo-2-phenyl-	57
3095	Propanenitrile, 2-phenyl-3-(p-toluoyl)-	50
Nitro Compounds		
7034	Acetophenone, m-nitrobenzylidene-	55
7133	Benzophenone, 4,4'-dinitro-	56
3888	1,3-Butanedione, 1-(m-nitrophenyl)-	58
2985	Butyrophenone, 4-nitro-3,4,4'-triphenyl-	-32
4181	Chalcone, 4-nitro-	-20
4308	-----, 4'-nitro-	40
Phenols		
3434	Acetophenone, 2',5'-dihydroxy-	19
2975	-----, m-hydroxy-	76
3276	-----, p-hydroxy-	41
4342	-----, 2',4',5'-trihydroxy-	48
3565	Benzophenone, 2,4'-dihydroxy-	52
3566	-----, 4,4'-dihydroxy-	60
2828	-----, 4-hydroxy-	48
6002	3-Buten-2-one, 4-(o-hydroxyphenyl)-	34
3916	Chalcone, 2,2'-dihydroxy-	42
6031	9-Fluorenone, 2-hydroxy-	55
3564	Propiophenone, p-hydroxy-	42
3905	Salicil	19
Quaternary Nitrogen Compounds		
Ammonium compounds.		
4483	benzyl(4,4-dibenzoyl-2,2-dimethylbutyl)- dimethyl----- chloride	97
4482	benzyl(2,2-dimethyl-5-oxo-3-undecenyl)- dimethyl----- chloride	91

TABLE I

Code No.	Classification and Name	K Value
KETONES		
Monosubstituted		
	Sulfonamides	
4799	d-Camphorsulfonamide, N-butyl-	73
5433	p-Toluenesulfonamide, <u>N</u> -methyl- <u>N</u> -(9-oxo-2-fluorenyl)-	24
	Miscellaneous	
4304	Acetophenone, 2-benzylthio-	55
5276	Alloxan	40
3439	d-10-Camphorsulfonic acid	70
	Iodonium compounds.	
3545	bis(acetophenyl)----- iodide	71
3796	Thiocyanic acid, phenacyl ester	83
Disubstituted		
	Acid-Heterocyclic Compounds	
5408	Octadecanoic acid, 10,11-epoxy-12-oxo-	74
5404	-----, 10,11-epoxy-9,12-dioxo-	22
	Alcohol-Heterocyclic Compounds	
6303	d-Fructose, 1-deoxy-1-morpholino-	-4
4009	Piperonyloin	-14
	Amide-Halides	
2922	Acetoacetanilide, 4'-chloro-	71
5749	-----, 4,4,4-trifluoro-	64
	Amine-Halides	
6677	Acetophenone, 2-[benzyl[(p-diethylamino)benzyl]-amino]-3',4'-dichloro-, dihydrochloride	61
6556	-----, 4'-bromo-2'-(N-methylanilino)-	32
6710	Ketone, 9(or 10)-bromo-3-phenanthryl (diethyl-amino)methyl	68
6641	Propiophenone, 3-(benzylmethylamino)-4'-chloro-, hydrochloride	88
	Amine-Heterocyclic Compounds	
5615	2-Pentanone, 4-(4,6-diamino-s-triazin-2-yl)-4-methyl-	68
4329	4-Penten-2-one, 3,3-bis[2-(4,6-diamino-s-triazin-2-yl)ethyl]-4-methyl-	40
6476	Propiophenone, 2-(benzylmethylamino)-3-morpholino-3-phenyl-	58

TABLE I

Code No.	Classification and Name	K Value
KETONES		
Disubstituted		
6308	Amine-Phenols Acetophenone, 3',4'-dihydroxy-2-[ (3-phenyl-propyl)amino]-, hydrochloride	63
6087	3-Buten-2-one, 4-(p-hydroxy-N-methylanilino)-	37
3088	Ester-Halides Acetophenone, 2-bromo-3'-hydroxy-, benzoate	47
3089	-----, 2-bromo-4'-hydroxy-, benzoate	59
5802	Heterocyclic-Nitro Compounds 3-Buten-2-one, 4-(5-nitro-2-furyl)-	94
5310, 5800	1-Propanone, 1-(5-nitro-2-furyl)-	98
6481	Propiophenone, 2,3-dimorpholino-3-(m-nitrophenyl)-	14
6648	Miscellaneous p-Acetanisidine, 2'-acetyl-	87
4407	Acetoacetic acid, $\alpha,\alpha$ -bis(2-cyanoethyl)-, methyl ester	63
2890	-----, $\alpha$ -[bis[p-(dimethylamino)phenyl]methyl]-, ethyl ester	
4360	Acetophenone, 2-[p-(dimethylamino)phenylimino]-2-phenyl-	74
2909	Benzoic acid, o-(p-bromobenzoyl)-	76
4320	-----, o-(p-hydroxybenzoyl)-	2
4952	-----, p-nitro-, (1-methyl-3-oxobutylidene)hydrazide	70
6620	Benzoin, 4,4'-dichloro-	72
4475	Benzophenone, 4-(2-hydroxyethoxy)-	62
3603	Coumarin, 3-acetyl-4-hydroxy-	99
7105	Cyclohexanone, 2-[ (p-chlorophenyl)thio]-	97
5543	1,3-Cyclopentanedicarboxylic acid, 4-(phenylimino)-5-oxo-, diethyl ester	
5779	2-Furanacrylic acid, cis/trans- $\alpha$ -acetyl-, ethyl ester	94
3790	2(5H)-Furanone, 3,4-dichloro-5-phenacyl-	91
3123	Iodonium compounds. bis(acetoacetamidophenyl)----- iodide	83
3614	Isatin, 5,7-dinitro-	96
3711	Malton	28
6546	Morpholinium compounds. 4-benzyl-4-[ (2,5,8,11,14,17,20-heptamethyl-3,6,9,12,-15,18,21-heptoxo-23-hydroxy)tetraacosyl]----- chloride	74
5409	Octadecanoic acid, 10,11-dihydroxy-9,12-dioxo-	60
6483	1-Penten-3-one, 1-(2-furyl)-5-morpholino-, hydrochloride	79
6482	1-Propanone, 1-(2,5-diphenyl-3-furyl)-3-morpholino-	85
5234	Propiophenone, 2-bromo-3',4'-dimethoxy-	66
3082	-----, 2,3-dibromo-4'-chloro-3-(3,4-methylene-dioxyphenyl)-	6

TABLE I

Code No.	Classification and Name	K Value
KETONES		
Disubstituted		
Miscellaneous		
Pyridinium compounds.		
6317	1-(6-chloro-3-phenanthrylcarbonylmethyl)----- bromide	-36
6014	Pyruvic acid, ( <i>o</i> -nitrophenyl)-	51
3351	-----, ( <i>p</i> -nitrophenyl)-, methyl ester	1
6797	Tartaric anhydride, diacetyl-	37
3843	Thiocyanic acid, 2-thenoylmethyl ester	83
6411	Urea, 1-(1,1-dimethyl-3-oxobutyl)-3-( <i>p</i> -nitrophenyl)-	
	2-thio-	78
6410*	-----, 3-(2-hydroxyethyl)-1-(1,1-dimethyl-3-oxobutyl)-	
	2-thio-	98
Polysubstituted		
4119	Acetoacetic acid, 2-(2,2,2-trichloro-1-hydroxyaminoethyl)-, ethyl ester	45
6642	Acetophenone, 2-(benzylmethylamino)-3'-chloro-4'-ethoxy-, hydrochloride	87
2995	-----, 4'-[ (2,2,2-trichloro-1-hydroxyethyl)amino]-	71
7226	9-Acridone, 3-chloro-7-methoxy-	-10
3452	Benzoic acid, 6-benzoyl-3-chloro-2-nitro-	84
3911	2-Cyclohexene-1,2-dicarboxylic anhydride, 5-acetyl-3-carboxymethyl-4,6,6-trihydroxy-6-methyl-, $\gamma$ -lactone	44
4866	Flavanone, <i>d</i> -3,3,4,5,7-pentahydroxy-	28
5389	Naringenin	34
5233	Propiophenone, 3-chloro-4'-hydroxy-3'-hydroxy-	77
6368	$4H$ -Pyran-4-one, 2-benzoyl-3-hydroxy-6-(hydroxymethyl)-	13
LACTAMS		
4017	Acetic acid, (3,6-dioxo-2-phenyl-1,2,3,6-tetrahydro-pyridazin-4-yl)-	-5
7198	Benzenesulfonic acid, <i>p</i> -(4,5-dihydro-3-methyl-5-oxopyrazol-1-yl)-	51
5556	2 <i>H</i> -1,4-Benzothiazine-2,3-diacetic acid, 3,4-dihydro-3-oxo-	29
4705*	4( $3H$ )-Benzotriazinone	100
7254*	-----, 3-butyl-	95
7254A	-----, 3-phenyl-	88
4238	Caffeine, tetrahydro-	96
4926	Caproic acid, $\epsilon$ -amino-, lactam	77

TABLE I

Code No.	Classification and Name	K Value
LACTAMS		
3781	Carbostyryl, 1-methyl-	86
3229	-----, 4-methyl-	<u>100</u>
3674	Isatin	<u>44</u>
3614	-----, 5,7-dinitro-	96
3414	-----, 7-methyl-	<u>81</u>
4114	3-Morpholone	14
5766	Naphthostyryl, 5-nitro-	99
3853	6(5H)-Phenanthridinone	27
4250	2,5-Piperazinedione	-65
5619	2-Piperazinone, 4-(4,6-diamino-s-triazin-2-yl)- 3,3-dimethyl-	<u>94</u>
5620	Piperazine, 4-[4,6-bis(chloroamino)-s-triazin-2-yl]- 1-chloro-3,3-dimethyl-	92
4936	3-Pyrazolecarboxylic acid, 5-oxo-, ethyl ester	<u>55</u>
6064	3,5-Pyrazolidinedione, 4-butyl-1,2-diphenyl-, sodium derivative	79
3615	5-Pyrazolone, 3-amino-1-phenyl-	58
6084	5(4H)-Pyrazolone, 4-isonitroso-3-methyl-1-phenyl-	60
3791	-----, 3-methyl-1-phenyl-	65
4018	4-Pyridazineacetic acid, 1,2,3,6-tetrahydro-3,6-dioxo- 2-phenyl-, ethyl ester	13
3668	3(2H)-Pyridazinone, 4,5-dichloro-2-phenyl-	74
4931	3(2H)-Pyridazole, 4,5-dihydro-	96
3937	2(1H)-Pyridone, 3-cyano-4,6-dimethyl-	<u>70</u>
3765, 7040	-----, 1-methyl-	-4, <u>99</u>
6700	Pyroglutamic acid, 3-pentyl-4-phenyl-	74
3198	2-Pyrrolidone, 5-methyl-	18
5329	-----, 1-vinyl-	82
6379	4(3H)-Quinazolinone, 3-[2-(diethylamino)ethyl]-, dihydrobromide	76
2803	Spiro[pseudoisoindole-1,9'-xanthen]-3(2H)-one, 3',6'-bis(diethylamino)-	-4
6705	Sulfamide, N'-antipyrinyl-N,N-dimethyl-	71
LACTONES		
Unsubstituted		
2833	1-Apocamphaneacetic acid, 2-hydroxy-, lactone	75
5007, 5564*	2-Biphenylcarboxylic acid, 2'-hydroxy-, $\delta$ -lactone	<u>100</u> , <u>97</u>
3636	3,3'-Bipthalide	-32
4929	Caproic acid, $\beta$ -hydroxy-, $\beta$ -lactone	13
4417	Cinnamic acid, $\alpha$ -( $\beta$ -hydroxy-p-methylstyryl)-, $\gamma$ -lactone	<u>44</u>
7159	Coumarin, 4-methyl-	91
3986	2-Pentenoic acid, 4-hydroxy-, $\gamma$ -lactone, dimer	79

TABLE I

Code No.	Classification and Name	K Value
LACTONES		
Unsubstituted		
3602	Phthalide	62
3254	-----, 3-benzylidene-	11
3783	-----, 3-ethylidene-	49
3382	-----, 3-phenyl-	45
3915	-----, 3-propylidene-	86
Substituted		
4102	Acetic acid, (2-hydroxyethyl)-, lactone	-15
3470	-----, phthalidylidene-, ethyl ester	-4
4862	Acetoacetic acid, 2-(2-hydroxyethyl)-, $\gamma$ -lactone	47
3767	1,3-Benzodioxan, 8-methoxy-2-methyl-4-oxo-	39
3820	1,3-Benzodioxan-4-one	86
3770	-----, 6-bromo-2-methyl-	87
3826	-----, 6-chloro-2,3-dimethyl-	88
3752	-----, 6-chloro-2-methyl-	78
3228	-----, 2-(o-chlorophenyl)-	54
3823	-----, 2-( $\overline{2},6$ -dichlorophenyl)-	32
3753	-----, 2,8-dimethyl-	85
3736	-----, 2-methyl-	82
3821	-----, 2-(3,4-methylenedioxyphenyl)-	24
3825	-----, 8-methyl-2-(3,4-methylenedioxyphenyl)-	52
3232	-----, 2-(m-nitrophenyl)-	81
3227	-----, 2-phenyl-	84
3822	-----, 2-styryl-	-11
3413	Benzoic acid, 2-hydroxymercury-3-nitro-, $\gamma$ -lactone	98
6477	2H-1-Benzopyran-3-carboxylic acid, 8-allyl-2-oxo-, 2-(dibenzylamino)ethyl ester, hydrochloride	58
3771	1,3-Benzoxazine, 1-acetyl-4-oxo-2-phenyl-	66
3774	-----, 1-acetyl-2-trichloromethyl-4-oxo-	-50
6815	2-Biphenylcarboxylic acid, 5'-chloro-2'-hydroxy-, 6-lactone	95
6849	-----, 2'-hydroxy-5'(?)-nitro-, 6-lactone	78
2906	Butyric acid, 4-benzoyl-4-hydroxy-2,3-diphenyl-, $\gamma$ -lactone	-27
5920	-----, 2,4-dihydroxy-3,3-dimethyl-, $\gamma$ -lactone	36
5795	Carbazic acid, 2-(2-hydroxyethyl)-, $\gamma$ -lactone, hydrochloride	97
5798	-----, 2-(2-hydroxypropyl)-, $\gamma$ -lactone, hydrochloride	95
2789	$\alpha$ -Conidendrin, diacetate	41
2794	di-p-toluenesulfonate	22
2790	$\beta$ -Conidendrin, diacetate	20
2795	di-p-toluenesulfonate	15

TABLE I

Code No.	Classification and Name	K Value
LACTONES		
Substituted		
2791	$\alpha$ -Conidendrol, tetraacetate	64
2793	tetrabenzoate	10
2792	$\beta$ -Conidendrol, tetraacetate	30
3775	Coumalic acid, methyl ester	97
3603	Coumarin, 3-acetyl-4-hydroxy-	99
5270	-----, 5,7-dihydroxy-4-methyl-	45
3435	-----, 6-methoxy-4-methyl-	-5
7129	-----, 3,3'-thiobis[4-hydroxy-	64
3675	Crotonic acid, $\alpha$ -anilino- $\beta$ -chloro- $\gamma$ -hydroxy- $\gamma$ -methoxy-, $\gamma$ -lactone	34
3634	-----, 2-cyano-4-hydroxy-2,4-diphenyl-, $\gamma$ -lactone	-78
3622	-----, 2,3-dichloro-4-hydroxy-4-phenyl-, $\gamma$ -lactone	24
3911	2-Cyclohexene-1,2-dicarboxylic anhydride, 5-acetyl- 3-carboxymethyl-4,6,6-trihydroxy-6-methyl-, $\gamma$ -lactone	44
3623	2(5H)-Furanone, 3,4-dichloro-5-dodecyloxy-	82
3631	-----, 3,4-dichloro-5-hydroxy-, carbanilate	44
3790	-----, 3,4-dichloro-5-phenacyl-	91
3632	-----, 5,5'-oxybis[3,4-dichloro-	65
5169	Heptanedioic acid, 3-(1-hydroxy-1-methylethyl)-, $\gamma$ -lactone	55
5161	Heptanoic acid, 3-(1-hydroxy-1-methylethyl)-6-oxo-, $\gamma$ -lactone	60
3993	Hexanoic acid, 5-hydroxy-4,4-dimethyl-6-nitro-, 6-lactone	81
4891	2-Isoxazolin-5-one, 4-benzylidene- $\beta$ -methyl-	51
3821	4H-Naphtho[2,3-d]-m-dioxin-4-one, 2-methyl-	71
2787	2-Naphthoic acid, 4-(3,4-dimethoxyphenyl)-1,2,3,4- tetrahydro-3-(hydroxymethyl)-6,7-dimethoxy-, $\gamma$ -lactone (from $\alpha$ -conidendrin)	38
2788	$\gamma$ -lactone (from $\beta$ -conidendrin)	40
2801	Phthalide, 3,3-bis[p-(dimethylamino)phenyl]-	-239
2802	-----, 3,3-bis[p-(dimethylamino)phenyl]-6-(dimethyl- amino)-	-1
5275	-----, 3,3-bis(2,4,6-trihydroxy- $m$ -tolyl)-	51
4011	Santonin	82
6391	$\alpha$ -Toluic acid, $\alpha$ -hydroxy- $\alpha$ -sulfo-, $\gamma$ -lactone, copper(II) salt	60
5273	Umbelliferone, 3-benzyl-4-methyl-	70
3324, 7029	-----, 4-methyl-	42, 57
3940	Valeric acid, 5-hydroxy-4,4-dinitro-, 6-lactone	44

TABLE I

Code No.	Classification and Name	K Value
MERCURY COMPOUNDS		
4495	Acetic acid, p-aminophenylmercury(II) salt	100
3399	2,3-dimethoxytetramethylenebis-, mercury(II) salt	100
2875	phenylmercury(II) salt	100
3413	Benzoic acid, 2-hydroxymercuri-3-nitro-, $\gamma$ -lactone	98
3590	Benzothiazole, 2-phenylmercurithio-	75
4496*	Boric acid, triphenylmercuri(II) derivative	97
3961	Carbamic acid, bis(2-hydroxyethyl)dithio-, mercury(II) salt	-16
3953	-----, diethyldithio-, mercury(II) salt	72
3437	Furan, 2-chloromercuri-	94
4497	Gluconic acid, phenylmercury(II) salt	85
4499	Lactic acid, phenylmercury(II) salt	100
3372	Mercury, dibenzyl-	(T)
3135, 3586	-----, diphenyl-	100,
4494	lactex	(T)
3592	-----, (dodecylthio)phenyl-	100
4498	-----, nitratophenyl-	100
359	-----, phenyl(phenylthio)-	94
3593	-----, phenyl(tetradecylthio)-	87
3957	4-Morpholinecarbodithioic acid, mercury(II) salt	92
4500*	Phthalic acid, phenylmercury(II) salt	90
3340	2-Propanol, 1-iodomercuri-	97
2760	Quinoline, 8-phenylmercurioxy-	83
6473	1,2,4-Thiadiazole, 3,5-bis(ethylmercurithio)-	65
3974	Thiazole, 2-acetamido-4,5-bis(acetoxymercuri)-	55
4137	2-Thiazolecarbamic acid, 4,5-bis(chloromercuri)-, benzyl ester	68
3271	Urea, (3-chloromercuri-2-methoxypropyl)-	69
NICKEL COMPOUNDS		
3065	Acetic acid, nickel(II) salt, monohydrate	67
3291	-----, (2,4-dichlorophenoxy)-, nickel(II) salt	42
3093	Anthranilic acid, nickel(II) salt	26
3080	Benzoic acid, $\omega$ -chloro-, nickel(II) salt	15
3081	-----, p-chloro-, nickel(II) salt	38
3292	-----, 3,4-dichloro-, nickel(II) salt	52
3106	Butyric acid, nickel(II) salt	54
3289	Caproic acid, $\alpha$ -ethyl-, nickel(II) salt	74
3282	Caprylic acid, nickel(II) salt	29
3096	Carbamic acid, ethylenebis[dithio-, nickel(II) salt	67
3070	Cinnamic acid, nickel(II) salt	42
3281	Citric acid, nickel(II) salt	24
3279	x-Cyclohexanecarboxylic acid, nickel(II) salt	-4
3280	x-Cyclohexanecaproic acid, nickel(II) salt	21

TABLE I

Code No.	Classification and Name	K Value
NICKEL COMPOUNDS		
3288	x-Cyclohexanepropionic acid, nickel(II) salt	31
3284	Fumaric acid, nickel(II) salt, pentahydrate	20
3290	9-Hendecenoic acid, nickel(II) salt	-4
5523	2,4-Hexanedione, nickel(II) derivative	79
3069	Lactic acid, nickel(II) salt	76
3286	Levulinic acid, nickel(II) salt	12
3283	Linoleic acid, nickel(II) salt	41
2768	Nicotine, compound with $\frac{1}{2}$ f. wt. nickel(II) salicylate and 1 f. wt. salicylic acid, monohydrate	93
3005	compound with $\frac{1}{3}$ f. wt. nickel(II) thiocyanate	99
3066	2,4-Fortanedione, nickel(II) derivative	80
3068	Phthalic acid, nickel(II) salt	72
3067	Salicylic acid, nickel(II) salt	65
3071	Succinic acid, nickel(II) salt	76
3285	Valeric acid, nickel(II) salt	51
NICOTINE DERIVATIVES		
2772	Nicotine, compound with 1/3 f. wt. aluminium(III) picrate	36
2770	compound with $\frac{1}{2}$ f. wt. cadmium(II) benzoate	90
3002	compound with $\frac{1}{2}$ f. wt. cadmium(II) <u>o</u> -benzoyl- benzoate, trihydrate	100
2764	compound with $\frac{1}{2}$ f. wt. cadmium(II) salicylate and 1 f. wt. salicylic acid, monohydrate	95
3006	compound with $\frac{1}{2}$ f. wt. cadmium(II) thiocyanate	100
3063	compound with $\frac{1}{2}$ f. wt. cadmium(II) thiocyanate and 1 f. wt. thiocyanic acid	99
3003	compound with $\frac{1}{2}$ f. wt. cobalt(II) <u>o</u> -benzoyl- benzoate, trihydrate	100
2765	compound with $\frac{1}{2}$ f. wt. cobalt(II) salicylate and 1 f. wt. salicylic acid, monohydrate	91
3009	compound with $\frac{1}{2}$ f. wt. cobalt(II) thiocyanate and 1 f. wt. thiocyanic acid	99
2771	compound with $\frac{1}{2}$ f. wt. copper(II) benzoate, mono- hydrate	98
3001	compound with $\frac{1}{2}$ f. wt. copper(II) <u>o</u> -benzoyl- benzoate and 1 f. wt. <u>o</u> -benzoylbenzoic acid	94
2763	compound with $\frac{1}{2}$ f. wt. copper(II) fumarate, penta- hydrate	99
2762	compound with 1 f. wt. copper(II) phthalate and 1 f. wt. phthalic acid, hydrate	100
3004	compound with 1 f. wt. copper(II) thiocyanate	100
3007	compound with $\frac{1}{2}$ f. wt. copper(II) thiocyanate and 1 f. wt. thiocyanic acid	100

TABLE I

Code No.	Classification and Name	K Value
NICOTINE DERIVATIVES		
2767	Nicotine, compound with $\frac{1}{2}$ f. wt. manganese(II) salicylate and 1 f. wt. salicylic acid, monohydrate	<u>96</u>
3008	compound with $\frac{1}{2}$ f. wt. manganese(II) thiocyanate and 1 f. wt. thiocyanic acid	<u>92</u>
2768	compound with $\frac{1}{2}$ f. wt. nickel(II) salicylate and 1 f. wt. salicylic acid, monohydrate	<u>93</u>
3005	compound with $\frac{1}{3}$ f. wt. nickel(II) thiocyanate	<u>99</u>
2761	compound with 2 f. wt. zinc oxalate and 1 f. wt. oxalic acid, pentahydrate	<u>94</u>
2769	compound with $\frac{1}{2}$ f. wt. zinc salicylate and 1 f. wt. salicylic acid, monohydrate	<u>79</u>
2774	compound with $\frac{1}{2}$ f. wt. zinc thiocyanate	<u>96</u>
2773	compound with 1 f. wt. zinc thiocyanate and 1 f. wt. thiocyanic acid	<u>89</u>
Nicotinium compounds.		
2776	bis(3,4-dichlorobenzyl)----- dichloride	<u>75</u>
2751	dibutyl----- dibromide	<u>42</u>
2804	didodecyl----- dipicrate	<u>87</u>
2807	diethylenebis----- dibromide	<u>93</u>
2741	dimethyl----- dibromide	<u>7</u>
2742	dimethyl----- diiodide	<u>53</u>
2784	dimethyl----- di-p-toluenesulfonate	<u>52</u>
Pyrrolidinium compounds.		
2748	1-benzyl-1-methyl-2-(3-pyridyl)----- thiocyanate	<u>89</u>
2744	1-butyl-1-methyl-2-(3-pyridyl)----- thiocyanate	<u>92</u>
2727	1-butyl-1-methyl-2-(3-pyridyl)----- p-toluenesulfonate	<u>97</u>
2747	1-(o-chlorobenzyl)-1-methyl-2-(3-pyridyl)----- thiocyanate	<u>93</u>
2745	1-(2,4-dichlorobenzyl)-1-methyl-2-(3-pyridyl)----- chloride	<u>90</u>
2746	1-(3,4-dichlorobenzyl)-1-methyl-2-(3-pyridyl)----- chloride	<u>80</u>
2740	1,1-dimethyl-2-(3-pyridyl)----- bromide	<u>62</u>
2753	1-dodecyl-1-methyl-2-(3-pyridyl)----- chloride	<u>84</u>
2805	1-dodecyl-1-methyl-2-(3-pyridyl)----- oleate	<u>88</u>
2786	1-dodecyl-1-methyl-2-(3-pyridyl)----- p-toluene-sulfonate	<u>83</u>
2752	1,1'-ethylenebis[1-methyl-2-(3-pyridyl)]----- bromide	<u>94</u>
2731	1-hexadecyl-1-methyl-2-(3-pyridyl)----- bromide	<u>94</u>
2725	1-hexadecyl-1-methyl-2-(3-pyridyl)----- thiocyanate	<u>100</u>
2785	1-hexadecyl-1-methyl-2-(3-pyridyl)----- p-toluene-sulfonate	<u>85</u>
2749	1-methyl-1-octyl-2-(3-pyridyl)----- iodide	<u>92</u>
2750	1-methyl-1-octyl-2-(3-pyridyl)----- thiocyanate	<u>85</u>

TABLE I

Code No.	Classification and Name	K Value
NITRILES		
Unsubstituted		
2857	Acetonitrile, diphenyl-	72
4826*, 5135	Acrylonitrile, 2-cyano-3-phenyl-	99, 99
3193	-----, 2,3-diphenyl-	90
4556	Adiponitrile, 2,2-diphenyl-	80
3761, 4297	Bicyclo[2.2.1]hept-5-ene-2,3-dicarbonitrile	(T), 100
3759	-----, 2-methyl-	79
3766	4-Cyclohexene-1,2-dicarbonitrile, 3,5-dimethyl-	89
7227	Cyclopentylacetonitrile	29
3764	9,10-Ethanoanthracene-11,12-dicarbonitrile, 9,10-dihydro-	-35
3042	Fumaronitrile	92
4022	Isovaleronitrile	-80
3533	Malononitrile	94
3045	-----, benzylidene-	94
3202	-----, 1-(4-biphenyl)ethylidene-	-8
3206	-----, 1-(3,5-diethylphenyl)ethylidene-	75
3201	-----, 1-(m-ethylphenyl)ethylidene-	96
3195	-----, 1-phenylbutylidene-	62
3192	-----, 1-phenylethylidene-	69
3203	-----, 1,2,3,4-tetrahydro-1-naphthylidene-	87
3200	-----, 1-(p-tolyl)ethylidene-	42
3637	Phthalonitrile	96
7097	Pimelonitrile, 4,4-dicyano-	85
4850	Sebaconitrile	95
3844	Succinonitrile, phenyl-	15
Monosubstituted		
Amides		
4858, 5563	Acetamide, 2-cyano-	32, 9
5519	-----, N-cyanomethyl-2,2-diphenyl-	90
6765	Acrylamide, 3-cyano-	96
3778, 4853	Quinaldonitrile, 1-benzoyl-1,2-dihydro-	47, 64
Amines		
2808	Acetonitrile, bis[p-(dimethylamino)phenyl]phenyl-	3
5882	-----, (ethylenedinitrilo)tetra-	76
7078	Benzonitrile, o-amino-, hydrochloride	65
4486	Cyanamide, dibenzyl-	85
5101	Glycinonitrile, N,N-diethyl-	26
5993	Hydratroponitrile, β-(benzylamino)-, hydrochloride	80
5992	-----, β-(cyclohexylamino)-, hydrochloride	94
5989	-----, β-(dimethylamino)-, hydrochloride	95
6269	-----, β-(ethylamino)-, hydrochloride	96
6383	-----, β-(isopropylamino)-, hydrochloride	94

TABLE I

Code No.	Classification and Name	K Value
NITRILES		
Monosubstituted		
	Amines	
5090	Propionitrile, 3-anilino-	67
5096	-----, 3-(N-ethylanilino)-	86
5093	-----, 3-(o-ethylanilino)-	90
5927	----- 2,2'-{(ethylenedimino)bis[2-methyl-	11
4856	-----, 3-(isopropylamino)-, salt with 1 f. wt. pentachlorophenol	92
5094	-----, 3-(N-methylanilino)-	97
6408	-----, 3-(octadecylamino)-	74
	Carbamates	
4366	Carbanilic acid, m-cyano-, isopropyl ester	87
4874	-----, l-cyanoethyl ester	64
5024	Hydracrylonitrile, carbanilate	67
5026	Lactonitrile, 2-methyl-, carbanilate	67
	Esters	
4842	Acrylic acid, 2-cyano-3-phenyl-, ethyl ester	78
3738, 4852 5906	Cinnamic acid, $\alpha$ -cyano-, ethyl ester	53, 66
3755	Cinnamyl alcohol, cyanoacetate	41
3211	Fumaric acid, di(2-cyanoethyl) ester	4
4928	3-Pentenemitrile, 2-hydroxy-, acetate	67
4480	Pimelic acid, $\gamma,\gamma$ -dicyano-, diallyl ester	63
4832	Propionitrile, 2-hydroxy-3-methyl-, acetate	100
4829*, 5116 6443*	Tartronitrile, methyl-, acetate	6
		100, 100
		99
	Ethers	
6017	Acetonitrile, (3,4-dimethoxyphenyl)-	77
5102	Butyronitrile, 2-phenoxy-	64
7076	Malononitrile, 3,4-diethoxybenzylidene-	94
3205	-----, 1-(p-phenoxyphenyl)ethylidene-	88
5081	Propionitrile, 3-(x-nonylphenoxy)-, branched C <sub>9</sub>	94
5082	-----, 3-(p-tolyloxy)-	79
	Halides	
4851	Acetonitrile, 2,4,6-trichlorophenyl-	96
7096	Cinnamonnitrile, o-chloro- $\alpha$ -phenyl-	87
3214	Fumaronitrile, chloro-	91
5750	Malononitrile, o-chlorobenzylidene-	91
5765	-----, p-chlorobenzylidene-	(1)

TABLE I

Code No.	Classification and Name	K Value
NITRILES		
Monosubstituted		
Halides		
3101	Propionitrile, 3-bromo-	43
5086	-----, 2-chloro-	45
3109	-----, 3-chloro-	46
5100	-----, 2,2,3-trichloro-	45
Heterocyclic Compounds		
5077, 6066	1-Aziridinopropionitrile	61, 42
3782	9-Carbazolylpropionitrile	43
3046, 7185	Malononitrile, furfurylidene-	<u>100</u> , 98
5411	4-Morpholinepropionitrile	86
3819, 4854	4-Morpholinesuccinonitrile	71, 86
7222	1-Piperidinebutyronitrile, $\alpha,\alpha$ -diphenyl-	85
5076	1-Piperidinecarbonitrile	98
5991	1-Piperidinepropionitrile, $\alpha$ -phenyl-, hydrochloride	88
Hydrazines and Derivatives		
5813	Propionitrile, 3-hydrazino-, monosulfate	89
5079	-----, 2,2'-hydrazonodi-	<u>100</u>
Ketones		
6012	Acetonitrile, benzoyl-	71
4549	1,1,3,3-Cyclohexanetetrapropionitrile, 2-oxo-	40
4406	1,1,3,3-Cyclopentanetetrapropionitrile, 2-oxo-	26
3617	Heptanedinitrile, 4-acetyl-4-(2-cyanoethyl)-	17
3608	-----, 4-acetyl-4-methyl-	98
3716	-----, 4-acetyl-4-phenyl-	70
4890	-----, 4-benzoyl-4-(2-cyanoethyl)-	47
4410	-----, 4-benzoyl-4-methyl-	91
5756	Pantanenitrile, 4-methyl-3-oxo-	65
3890	-----, 3-oxo-2-phenyl-	57
3095	Propanenitrile, 2-phenyl-3-(p-toluoyl)-	50
Nitro Compounds		
6013, 7077	Acetonitrile, p-nitrophenyl-	44, 88
7043	Benzonitrile, p-nitro-	(T)
5762	Malononitrile, m-nitrobenzylidene-	(T)
Phenols		
7075	Malononitrile, p-hydroxybenzylidene-	96
4423	1-Naphthalenepropionitrile, 2-hydroxy-	58

TABLE I

Code No.	Classification and Name	K Value
NITRILES		
Monosubstituted		
	Phosphorus Compounds	
5084	Phosphonic acid, 2-cyanoethyl-, dihexyl ester	98
5083	dimethyl ester	26
	Sulfides	
5990	Hydratopropionitrile, 3-(butylthio)-	88
3756	Propionitrile, 3,3'-thiodi-	68
	Sulfones	
3776	Acetonitrile, benzenesulfonyl-	71
3780	Propionitrile, 3-benzenesulfonyl-	26
	Thiocarbamates	
3906	Carbamic acid, <u>N</u> -(2-cyanoethyl)- <u>N</u> -ethyldithio-, zinc salt	74
3216	-----, ethylenebis[ <u>N</u> -(2-cyanoethyl)dithio-, copper(II) salt	29
3056	disodium salt	47
3057	zinc salt	70
	Miscellaneous	
4855	Acetanilide, p-( <u>N</u> -cyanosulfamoyl)-, <u>N</u> <sup>4</sup> -calcium salt	51
5536	Acetic acid, cyano-, hydrazide	91
L491	Benzenesulfonamide, <u>N,N</u> -bis(2-cyanoethyl)-	91
4938*	Butyric acid, 4-cyano-2,2-dimethyl-	96
3634	Crotonic acid, 2-cyano-4-hydroxy-2,4-diphenyl-, $\gamma$ -lactone	-78
4557	Cyclopentanecarbonitrile, 2-imino-3,3-diphenyl-	84
5099	1,2-Ethanediol, cyano-	(T)
2989	Guanidine, 1,3-dicyano-, potassium salt	36
5977	Phthalimide, <u>N</u> -(3-cyanopropyl)-	80
5097	Propionitrile, 3-( <u>p</u> -tolylthio)-	90
3937	2( <sup>1</sup> H)-Pyridone, 3-cyano-4,6-dimethyl-	70
3737	Thioxanilonitrile	-9
Polysubstituted		
	Amide-Esters	
5335	Acrylic acid, 3-( <u>p</u> -acetamidophenyl)-2-cyano-, ethyl ester	-15
5515	Phenaceturic acid, $\alpha$ -cyano-, ethyl ester	59

TABLE I

Code No.	Classification and Name	K Value
NITRILES		
Polysubstituted		
	Amine-Ethers	
4362	Acetonitrile, 2-(o-anisidino)-	100
5087	Propionitrile, 3-(o-anisidino)-	93
5088	-----, 3-(p-phenetidino)-	83
	Amine-Halides	
5091	Propionitrile, 3-(m-chloroanilino)-	71
5092	-----, 3-(o-chloroanilino)-	85
	Amine-Heterocyclic Compounds	
5429	s-Triazine, 2,2'-(3-cyano-3-phenylpentamethylene)- bis[4,6-diamino-	10
5606	-----, 2,6-diamino-4-[ (1-cyanocyclohexyl)methylamino]-	59
5608	-----, 2,6-diamino-4-[ [N-(cyanomethyl)-1,1,3,3-tetra- methylbutyl]amino]-	21
5700	-----, 2,6-diamino-4-(o-cyanophenyl)-	87
5604	-----, 2,6-diamino-4-[ (1-cyanopropyl)methyl- amino].	-1
	Amine-Phenols	
4724	Propionitrile, 3,3'-[ (2-hydroxynaphth-1-ylmethyl)- imino]bis-	58
4481	-----, 3,3'-(5-phenylsalicylimino)bis-	74
	Carbamate-Halides	
4915	Carbanilic acid, m-cyano-, 2-chloroethyl ester	83
6263	Hydracrylonitrile, m-chlorocarbanilate	52
	Ether-Halides	
5075	Acetonitrile, 2,4-dichlorophenoxy-	100
5080	Propionitrile, 3-(o-chlorophenoxy)-	84
	Miscellaneous	
5015	Acetamide, N-(cyanoamidino)-	67
4407	Acetoacetic acid, $\alpha,\alpha$ -bis(2-cyanoethyl)-, methyl ester	63
5910	Acetonitrile, (4-hydroxy-3-methoxyphenyl)-, acetate	33
4298, 4857	Butyronitrile, 2-hydroxyethyl-4-(methylthio)-	93, 87
3219	Carbamic acid, N-(2-cyanoethyl)-N-2-[ (2-cyanoethyl)- amino]ethyl)dithio-	63
6262	Cinnamic acid, p-chloro- $\alpha$ -cyano-	60
3805	2-Furanacrylamide, $\alpha$ -cyano-	71
3804	2-Furanacrylic acid, $\alpha$ -cyano-, ethyl ester	62
5186	Lactic acid, m-cyanocarbanilate, butyl ester	82
3233	Propionitrile, 3-(p-chlorophenylthio)-	97
5293	-----, 3-(2-hydroxyethoxy)-, m-chlorocarbanilate	63

TABLE I

Code No.	Classification and Name	K Value
NITRIILES		
Polysubstituted		
Miscellaneous		
4927	Propionitrile, 3-[N'-(2-hydroxyethyl)anilino]-, sulfate	56
3231	Sulfone, p-chlorophenyl cyanomethyl	91
5089	p-Toluenesulfonanilide, 3-chloro-N-(2-cyanoethyl)-	84
NITRO COMPOUNDS		
Unsubstituted		
4649	Benzene, 1,3,5-trinitro-, with 10 percent water	99
3242	Biphenyl, 2-nitro-	81
3713	-----, 3-nitro-	73
3181	-----, 4-nitro-	83
4079	1-Butene, 2-nitro-1-phenyl-	99
4080	1-Pentene, 2-nitro-1-phenyl-	100
4045	Propene, 2-nitro-1-( <u>m</u> -nitrophenyl)-	72
4078	-----, 2-nitro-1-phenyl-	92
4084	-----, 2-nitro-1-(p-tolyl)-	100
3730	Stilbene, x,x,x-trinitro-	30
7145	Styrene, <u>m</u> , $\beta$ -dinitro-	80
3240, 4077*	-----, $\beta$ -nitro-	100, 100
Monosubstituted		
Acids		
3350	Cinnamic acid, <u>m</u> -nitro-	31
5513	-----, o(and p)-nitro-	81
3938	Heptanedioic acid, 4,4-dinitro-	-10
3347	Phthalic acid, 3-nitro-	48
Aldehydes		
3897	Benzaldehyde, <u>m</u> -nitro-	51
3998	-----, p-nitro-	74
Amides		
5059	Acetanilide, 2',4'-dinitro-	100
6016	-----, N-methyl-4'-nitro-	57
5047	-----, 3'-nitro-	86
4403	Benzamide, N-benzyl-p-nitro-	95
4658	-----, N-butyl-p-nitro-	78
4659	-----, N-sec-butyl-p-nitro-	94
4400	-----, N-cyclohexyl- <u>m</u> -nitro-	74
4668	-----, N,N-dibenzyl-p-nitro-	-2
4390	-----, N,N-diethyl-p-nitro-	91

TABLE I

Code No.	Classification and Name	K Value
NITRO COMPOUNDS		
Monosubstituted		
Amides		
4666	Benzamide, N,N-diisobutyl-p-nitro-	90
4401	-----, N,N-diisopropyl-m-nitro-	91
4394	-----, N,N-diisopropyl-p-nitro-	85
4398	-----, N-isobutyl-m-nitro-	86
4660	-----, N-isobutyl-p-nitro-	84
4392	-----, N-isopropyl-p-nitro-	87
4393	-----, N-methyl-p-nitro-	92
4395	-----, p-nitro-N,N-dipropyl-	90
4663	-----, p-nitro-N-pentyl-	89
3715	-----, N-(p-nitrophenethyl)-	71
4391	-----, p-nitro-N-propyl-	92
6437	Benzanilide, 2',4'-dinitro-	93
6434	-----, 2'-nitro-	67
6435	-----, 3'-nitro-	-31
6436	-----, 4'-nitro-	4
6186	Butyranilide, 2'-nitro-	41
5068	-----, 3'-nitro-	99
5069	-----, 4'-nitro-	98
5962	Phthalamide, N,N'-bis(o-nitrophenyl)-	47
5967	-----, N,N'-dicyclohexyl-, 3-nitro-	37
5969	-----, 3-nitro-, N,N'-dipentyl-	47
5971	Phthalanilide, N,N'-dibutyl-3-nitro-	24
5970	-----, 3-nitro-N,N'-dipentyl-	31
4419, 6111	Propionanilide, 2',4'-dinitro-	97,
5058	-----, 2'-nitro-	96
5057	-----, 3'-nitro-	94
		91
Amines		
4754	Aniline, N-allyl-2,4-dinitro-	88
4361	-----, N-ethyl-2,4-dinitro-	97
4307	-----, 4,4'-(p-nitrobenzylidene)bis[N,N-dimethyl-	51
4044	Benzylamine, N-(2-methyl-2-nitropropyl)-N-phenyl-	56
3525	Cyclohexylamine, N-(2,4-dinitrophenyl)di-	81
4770	Dibenzylamine, N-(2,4-dinitrophenyl)-	32
3941	1,5-Pentanediamine, 3,3-dinitro-, hydrochloride	85
5282	Toluene-2,4-diamine, 6-nitro-	96
6380	p-Toluidine, N,N-dimethyl-a-(2-nitro-9-fluor- enylidene)-, low melting isomer	46
5281	-----, 3,5-dinitro-	78
6994	Triphenylamine. 2-nitro-	(T)

TABLE I

Code No.	Classification and Name	K Value
NITRO COMPOUNDS		
Monosubstituted		
Carbamates		
5877	2-Benzoxazolinone, 5,6-dinitro-	88
5477	Carbamic acid, ethyl-, p-nitrophenyl ester	87
3939	-----, methyl ester, 3,3-dinitro-1,5-pentamethylenebis-	47
4670	Carbanilic acid, <u>m</u> -nitro-, isopropyl ester	94
5463	-----, p-nitro-, isopropyl ester	53
3304, 5013	Propanol, 2-methyl-2-nitro-, carbanilate	73, <u>95</u>
Esters		
4404	Benzoic acid, p-nitro-, p-nitrophenyl ester	39
4405	-----, m-tolyl ester	91
6301	Cinnamic acid, <u>m</u> -nitro-, ethyl ester	45
5907	-----, p-nitro-, methyl ester	54
3947	<u>o</u> -Cresol, 4,6-dinitro-, acetate	97
Ethers		
4980	Anisole, 5-allyl-2-(2,4-dinitrophenoxy)-	53
3887	-----, 3,5-dinitro-	78
3816	-----, <u>o</u> -(2-nitrovinyl)-	95
4765	Benzene, 1-allyl-4-(2,4-dinitrophenoxy)-3-methoxy-	44
4766	-----, p-bis(2,4-dinitrophenoxy)-	46
4085	1-Butene, 1-(p-methoxyphenyl)-2-nitro-	75
4977	Ether, benzyl 2,4-dinitrophenyl	96
4767	-----, 2-biphenyl 2,4-dinitrophenyl	52
4768	-----, 4-biphenyl 2,4-dinitrophenyl	60
4978	-----, cyclohexyl 2,4-dinitrophenyl	94
4769	-----, 2-cyclohexyl-4,6-dinitrophenyl 2,4-di-nitrophenyl	75
4508	-----, <u>o</u> -cyclohexylphenyl 2,4-dinitrophenyl	75
4421	-----, 2,4-dinitrophenyl <u>m</u> -nitrophenyl	80
4422	-----, 2,4-dinitrophenyl 2-nitro-p-tolyl	64
7208	-----, <u>o</u> -nitrophenyl phenyl	96
4426	Naphthalene, 1,5-bis(2,4-dinitrophenoxy)-	36
7147*	Styrene, 3,4-dimethoxy- $\beta$ -nitro-	86
7149*	Veratrole, 4-(2-nitropropenyl)-	97
Halides		
4024	Benzene, 1,2-dichloro-4,5-dinitro-	99
6996	-----, 1,3-dichloro-4,6-dinitro-	98
3391	-----, 1,4-dichloro-2-nitro-	84
5193	-----, pentachloronitro-	71
5194	-----, 1,2,3,4-tetrachloro-5-nitro-	81
4876, 7111	-----, 1,2,4,5-tetrachloro-3-nitro-	79, <u>85</u>
5551	-----, 1,2,4-trichloro-3,5-dinitro-	75

TABLE I

Code No.	Classification and Name	K Value
NITRO COMPOUNDS		
Monosubstituted		
	Halides	
3064	Biphenyl, <i>x</i> -chloro-2-nitro-	90
6267	Butane, 1-( <i>p</i> -chlorophenyl)-1-(3,4-dichlorophenyl)-2-nitro-	48
4034	1-Butene, 1-( <i>o</i> -chlorophenyl)-2-nitro-	100
4040	-----, 1-( <i>p</i> -chlorophenyl)-2-nitro-	80
4086	-----, 1-(2,4-dichlorophenyl)-2-nitro-	94
4087	-----, 1-(3,4-dichlorophenyl)-2-nitro-	76
6266	Cyclohexane, 1,2-dibromo-4-nitro-5-phenyl-	26
5557	Stilbene, 2'-chloro-2,4,6-trinitro-	-26
4090	Styrene, $\beta$ -bromo- $\beta$ -nitro-	91
3813, 7152	-----, 2-chloro- $\beta$ ,4-dinitro-	89, 93
3811	-----, <i>o</i> -chloro- $\beta$ -nitro-	98
3812	-----, <i>p</i> -chloro- $\beta$ -nitro-	81
3814, 7153	-----, 2,4-dichloro- $\beta$ -nitro-	70, 83
3815	-----, 3,4-dichloro- $\beta$ -nitro-	81
	Heterocyclic Compounds	
3321	1,3-Benzodioxan, 6-nitro-	57
7217	Benzofuran, 3-nitro-	27
5175	Benzofurazan, 5-methyl-4-nitro-, $N^3$ -oxide	100
2737	1 <i>H</i> -Benzotriazole, 6-nitro-	87
4081	1-Butene, 1-(2-furyl)-2-nitro-	100
4083	-----, 1-(3,4-methylenedioxyphenyl)-2-nitro-	70
3235	Carbazole, 1,3,6,8-tetrinitro-, crude	91
5380	<i>m</i> -Dioxane, 2-ethyl-2,5-dimethyl-5-nitro-	94
5317, 5791	Furan, 2-nitro-	83, 73
3440, 3789	-----, 2-(2-nitrovinyl)-	96, 100
4041*	-----, 2-[2-(2,4,6-trinitrophenyl)vinyl]-	100
2728	-----, 2-(2,4,6-trinitrostyryl)-	30
3729	Pyridine, 3-(3-nitro-2-pyrazolin-5-yl)-	77
5874	Pyrimidine, 1,3-bis(1-methylheptyl)-hexahydro-5-methyl-	95
4036	5-nitro-	86
4364	Stilbene, 3,4-methylenedioxy-2',4'-dinitro-	18
3610	Styrene, 3,4-methylenedioxy- $\beta$ -nitro-	33
4252	-----, 2,4,6-trinitro-3-(5-nitro-2-furyl)-	91
3577	Thianaphthene, 3-nitro-	96
3817, 7154*	Thiophene, 2-(2-nitrovinyl)-	91, 97
	Hydrazides	
7033	Benzoic acid, <i>m</i> -nitro-, hydrazide	93

TABLE I

Code No.	Classification and Name	K Value
NITRO COMPOUNDS		
Monosubstituted		
Hydrazides		
4945	Benzoic acid, <u>p</u> -nitro-, benzylidenehydrazide	6
4946	butylidenehydrazide	95
4940	<u>sec</u> -butylidenehydrazide	88
4957	cinnamylidenehydrazide	64
4759, 4955	cyclohexylidenehydrazide	98, 99
4757, 4954	cyclopentylidenehydrazide	98, 95
4760, 4958	2-ethylbutylidenehydrazide	91, 97
4949	isopropylidenehydrazide	66
4764, 4947	$\alpha$ -methylbenzylidenehydrazide	45, 86
4944	methylenehydrazide	89
4953	propylidenehydrazide	97
5973	Phthalic acid, 3-nitro-, hydrazide	29
Hydrazines and Derivatives		
4091	Cyclohexanone, 2,4-dinitrophenylhydrazone	74
4761	2-Heptanone, 2,4-dinitrophenylhydrazone	90
4976	Mesityl oxide, 2,4-dinitrophenylhydrazone	40
Imides		
6051	Phthalimide, <u>N</u> -butyl-3-nitro-	84
6324	-----, <u>N</u> -dodecyl-4-nitro-	98
5980	-----, <u>N</u> -ethyl-3-nitro-	87
5985	-----, <u>N</u> -hexyl-3-nitro-	49
6055	-----, <u>N</u> -hexyl-4-nitro-	58
6045	-----, <u>N</u> -isobutyl-3-nitro-	55
5983	-----, <u>N</u> -isopropyl-3-nitro-	81
5981	-----, <u>N</u> -methyl-3-nitro-	72
6274	-----, 4-nitro-	87
5984	-----, 3-nitro- <u>N</u> -octyl-	59
6056	-----, 4-nitro- <u>N</u> -octyl-	94
5986	-----, 3-nitro- <u>N</u> -pentyl-	93
6052	-----, 3-nitro- <u>N</u> -phenethyl-	66
4387	-----, <u>N</u> -( <i>m</i> -nitrophenyl)-	63
6048	-----, 3-nitro- <u>N</u> -(2-phthalimidoethyl)-	59
6054	-----, 4-nitro- <u>N</u> -(2-phthalimidoethyl)-	36
5982	-----, 3-nitro- <u>N</u> -propyl-	93
Imines		
3895	Aniline, <u>N</u> -benzylidene- <i>m</i> -nitro-	88
3893	-----, <u>N</u> -( <i>m</i> -nitrobenzylidene)-	66
6035	2-Fluorenamine, <u>N</u> -( <i>p</i> -nitrobenzylidene)-	59

TABLE I

Code No.	Classification and Name	K Value
NITRO COMPOUNDS		
Monosubstituted		
5032	Imines <i>p</i> -Phenylenediamine, <u>N,N'</u> -bis(2,7-dinitrofluoren-9-ylidene)-	52
5038	-----, <u>N,N'</u> -bis(2-nitrofluoren-9-ylidene)-	51
Ketones		
7034	Acetophenone, <i>m</i> -nitrobenzylidene-	55
7133	Benzophenone, 4,4'-dinitro-	56
3888	1,3-Butanedione, 1-( <i>m</i> -nitrophenyl)-	58
2985	Butyrophenone, 4-nitro-3,4,4'-triphenyl-	-32
4181	Chalcone, 4-nitro-	-20
4308	-----, 4'-nitro-	40
Lactones		
6819	2-Biphenylcarboxylic acid, 2'-hydroxy-5'(?)-nitro-, 6-lactone	78
3993	Hexanoic acid, 5-hydroxy-4,4-dimethyl-6-nitro-, 6-lactone	81
3940	Valeric acid, 5-hydroxy-4,4-dinitro-, 6-lactone	44
Nitriles		
6013, 7077	Acetonitrile, <i>p</i> -nitrophenyl-	44, 88
7043	Benzonitrile, <i>p</i> -nitro-	(T)
5762	Malononitrile, <i>m</i> -nitrobenzylidene-	(T)
Phenols		
3901	<i>m</i> -Cresol, 2,4,6-trinitro-	75
6059	Phenol, 2-cyclohexyl-4,6-dinitro-	99
2853, 4186	-----, 2,4-dinitro-6-phenyl-	100, 88
3900	-----, 4-isopropyl-2,6-dinitro-	83
4089	-----, <i>p</i> -(2-nitropropenyl)-	99
6244	Thymol, 2,6-dinitro-	93
3899	3,5-Xylenol, 2,5-dinitro-	67
6400	-----, 4-nitro-	83
Phosphorus Compounds		
2997	Phosphonothioic acid, phenyl-, ethyl( <i>o</i> -nitrophenyl) ester	100
2998	ethyl( <i>p</i> -nitrophenyl) ester	100
2893	Thiophosphoric acid, <i>O,O',O''</i> -tris( <i>p</i> -nitrophenyl) ester	-39

TABLE I

Code No.	Classification and Name	K Value
NITRO COMPOUNDS		
Monosubstituted		
	Sulfides	
3040	Disulfide, bis( <u>o</u> -nitrophenyl)	27
4046	Sulfide, bis[(2-nitro-1-phenyl)ethyl.]	28
4038	-----, bis[(2-nitro-1-phenyl)propyl]	<u>99</u>
Miscellaneous		
3898	Benzaldehyde, <u>p</u> -nitro-, thiosemicarbazone	76
4146	Carbamic acid, 3,3-dinitro-1,5-pentamethylenebis[thio-, diphenyl ester	-15
5180	Carbonic acid, allyl 4,6-dinitro- <u>o</u> -tolyl ester	98
5766	Naphhostyryl, 5-nitro-	<u>99</u>
	Pyridinium compounds.	
3799	1-(2,4-dinitrophenyl)----- chloride	87
4316	$\beta$ -Styrenesulfonyl chloride, <u>p</u> -nitro-	46
3682	Thiocyanic acid, 2,4-dinitrophenyl ester	68
Disubstituted		
	Acid-Amides	
2759	L-Glutamic acid, <u>N</u> -( <u>m</u> -nitrobenzoyl)-	41
5531*	Phthalanilic acid, 2'-nitro-	95
5532	-----, 4'-nitro-	55
	Alcohol-Halides	
4470	Benzyl alcohol, 3,4-dichloro- $\alpha$ -1-nitroethyl-	87
7261	2-Butanol, 1,1,1-trichloro-3-nitro-	19
7142*, 7143	2-Propanol, 1,1,1-trichloro-3-nitro-	<u>88</u> , <u>97</u>
	Amide-Ethers	
4762, 4996	<u>p</u> -Anisanilide, 2'-nitro-	92, 89
4998	-----, 4'-nitro-	64
5972	Phthalamide, <u>N,N'</u> -bis( <u>p</u> -methoxyphenyl)-3-nitro-	44
	Amide-Halides	
4771	Benzanilide, 2-chloro-3'-nitro-	49
4772	-----, 2-chloro-4'-nitro-	46
4415	-----, 3'-chloro-3-nitro-	56
4446	-----, 4-chloro-2'-nitro-	64
4435	-----, 4-chloro-3'-nitro-	42
4747	-----, 4-chloro-4'-nitro-	56
4680	-----, 4'-chloro-4-nitro-	45
4431	-----, 2,4-dichloro-2'-nitro-	53
4904	-----, 2,4-dichloro-3'-nitro-	23
5769	Formanilide, 2'-chloro-4'-nitro-	<u>96</u>

TABLE I

Code No.	Classification and Name	K Value
NITRO COMPOUNDS		
Disubstituted		
	Amide-Heterocyclic Compounds	
2798	2-Furamide, 5-nitro-	95
4397	Morpholine, 4-( <u>m</u> -nitrobenzoyl)-	96
5132	Thiazole, 2-acetamido-4-methyl-5-nitro-	96
	Amine-Ethers	
3885	p-Anisidine, 2,6-dinitro-	74
4369	o-Anisidine, N-(2,4-dinitrophenyl)-	72
4669	Dibenzylamine, N-[2-(2,4-dinitrophenoxy)ethyl]-	84
5279	p-Phenetidine, 2-nitro-	81
	Amine-Halides	
4139	Aniline, 2-chloro-4-nitro-	86
4140	-----, 4-chloro-2-nitro-	88
3449	<u>m</u> -Toluidine, 2,6-diiodo-4-nitro-	60
	Ester-Halides	
4903	Benzoic acid, 2,4-dichloro-, o-nitrophenyl ester	18
4460	-----, p-nitro-, p-chlorophenyl ester	23
4878	Phenol, 2,3,5,6-tetrachloro-4-nitro-, acetate	87
	Ester-Heterocyclic Compounds	
4007, 5787	2-Furanmethanediol, 5-nitro-, diacetate	57, 72
5804	dipropionate	86
4006, 5790	Furfuryl alcohol, 5-nitro-, acetate	85, 86
4662	-----, tetrahydro-, p-nitrobenzoate	89
4967	2-Furoic acid, 5-nitro-, ethyl ester	100
5792, 6828	methyl ester	92, 97
5785, 6829	propyl ester	94, 99
4664	2-Pyridineethanol, <u>m</u> -nitrobenzoate	80
	Ether-Halides	
4877	Anisole, 2,3,5,6-tetrachloro-4-nitro-	83
4561	Ether, p-bromophenyl 2,4-dinitrophenyl	17
4786	-----, 4-tert-butyl-2-chlorophenyl 2,4-dinitrophenyl	23
4560	-----, p-chlorophenyl 2,4-dinitrophenyl	45
	Ether-Heterocyclic Compounds	
6384	Benzothiazole, 2-butoxy-6-nitro-	89
5320	Ether, methyl 5-nitrofurfuryl	84
4979	-----, tetrahydrofurfuryl 2,4-dinitrophenyl	98
4420	Furan, 2-(2,4-dinitrophenoxy)methyl)tetrahydro-	100
2736	-----, 2-methoxymethyl-5-nitro-	95

TABLE I

Code No.	Classification and Name	K Value
NITRO COMPOUNDS		
Disubstituted		
	Ether-Phenols	
4088	1-Butene, 1-(4-hydroxy-3-methoxyphenyl)-2-nitro-	93
4897	Isoeugenol, $\beta$ -nitro-	83
7148*	Styrene, 4-hydroxy-3-methoxy- $\beta$ -nitro-	88
	Ether-Thiocyanates	
5666	Phenetole, 4-(1-methylheptyl)-x-nitro- $\beta$ -(2-thiocyanato-ethoxy)-	80
5665	-----, 2-nitro-4- <u>tert</u> -pentyl- $\beta$ -thiocyanato-	98
	Halide-Heterocyclic Compounds	
4372	1,3-Benzodioxan, 2,4-bis(trichloromethyl)-6-nitro-	63
3236	Carbazole, 3,6-dichloro-1,8-dinitro-	81
4082*	Furan, 2-(2-bromo-2-nitrovinyl)-	100
4968	-----, 2-chloro-5-nitro-	94
7151	-----, 5-chloro-2-(2-nitrovinyl)-	100
3983	Pyridine, 2-chloro-5-nitro-	76
	Halide-Hydrazides	
4956	Benzoic acid, p-nitro-, o-chlorobenzylidenehydrazide	55
4959	2,2,2-trichloroethylidenehydrazide	65
	Halide-Imides	
6047	Phthalimide, N-(2-bromoethyl)-3-nitro-	87
6053	-----, N-(2-bromoethyl)-4-nitro-	82
6057	-----, N-(o-chlorobenzyl)-4-nitro-	100
6058	-----, N-(p-chlorobenzyl)-4-nitro-	87
	Halide-Phenols	
4489	Phenol, 2-bromo-4- <u>tert</u> -butyl-6-nitro-	86
3390	-----, 2-chloro-4,6-dinitro-	100
4777	-----, 2,2'-(2,2,2-trichloroethylidene)bis[4-chloro-6-nitro-	91
	Heterocyclic-Hydrazides	
6701	Allophanic acid, 5-nitrofurfurylidenehydrazide	49
4763, 4951	Benzoic acid, p-nitro-, piperonylidenehydrazide	74, 0
	Heterocyclic-Ketones	
5802	3-Buten-2-one, 4-(5-nitro-2-furyl)-	94
5310, 5800	1-Propanone, 1-(5-nitro-2-furyl)-	100, 98
6481	Propiophenone, 2,3-dimorpholino-3-(m-nitrophenyl)-	14

TABLE I

Code No.	Classification and Name	K Value
NITRO COMPOUNDS		
Disubstituted		
Heterocyclic-Semicarbazones		
2796	2-Furaldehyde, 5-nitro-, semicarbazone	37
2799	semioxamazone	85
6696	Ketone, methyl 5-nitro-2-furyl, semicarbazone	97
Miscellaneous		
4986, 5126	Benzamide, N-(2-hydroxyethyl)-p-nitro-	77, 92
3232	1,3-Benzodioxan-4-one, 2-(m-nitrophenyl)-	81
3413	Benzoic acid, 2-hydroxymercuri-3-nitro-, $\gamma$ -lactone	98
4952	-----, p-nitro-, (1-methyl-3-oxobutylidene)hydrazide	70
4002	-----, 4-nitro-2-sulfo-, potassium(sulfonate) salt	16
3475	Carbazole, 3-nitro-9-nitroso	41
7219	Disulfide, bis(5-nitroquinol-8-yl)	11
4895	Ethanol, 2-(2,4-dinitroanilino)-	84
5561	-----, 2,2'-dit.io-, bis(p-nitrobenzoate)	27
4478	-----, 2-[2-nitro-4-(tert-pentyl)phenoxy]-	88
6744	Fumaramic acid, N-carbamoyl-, 2-nitrobutyl ester	57
5313, 5788	2-Furaldehyde, 5-nitro-	96, 95
5799	anti-oxime	89
5311, 5789	2-Furfuryl alcohol, 5-nitro-	92, 94
5784	2-Furoic acid, 5-nitro-	84
5815	2-Furoyl chloride, 5-nitro-	86
3614	Isatin, 5,7-dinitro-	96
2797	Ketone, methyl 5-nitro-2-furyl	100
6711	Octadecanophenone, 2'-chlor-, 2,4-dinitrophenyl-hydrazone	-11
6046	1,4-Phthalazinedione, 2,3-dihydro-5-(p-nitrobenzamido)-	-2
6043	2-Propanol, 1,1,1-trichloro-3-nitro-, carbanilate	88
6014	Pyruvic acid, (o-nitrophenyl)-	51
3351	-----, (p-nitrophenyl)-, methyl ester	1
3478	8-Quinolinol, 5,7-dinitro-	81
6470	Salicylamide, N-butyl-3-cyclohexyl-5-nitro-	51
7272	Salicylic acid, 5-nitro-, ethyl ester	44
5951	Sulfide, 2-chlorocyclohexyl 2,4-dinitrophenyl	36
3272	Sulfoxide, 2-chloroethyl 2,4-dinitrophenyl	93
2996	$\alpha$ -Tuenephosphonic acid, $\alpha$ -hydroxy-m-nitro-, diethyl ester	81
Polysubstituted		
3975	Benzaldehyde, p-hydroxy-, (6-nitro-2-benzothiazolyl)-hydrazone	-52
3452	Benzoic acid, 6-benzoyl-3-chloro-2-nitro-	84
4932	Ethanol, 2-(2-chloro-3,5-dinitrobenzenesulfonamido)-	93

TABLE I

Code No.	Classification and Name	K Value
NITRO COMPOUNDS		
Polysubstituted		
5301	Furfuryl alcohol, 5-nitro-, bromoacetate	89
2754	chloroacetate	70
5300	p-chlorobenzoate	30
5302	x-chloropropionate	78
3721	Quinoline, 5-bromo-6-methoxy-8-nitro-	-7
6727	Salicylanilide, 5-chloro-2'-nitro-	95
6728	-----, 5-chloro-3'-nitro-	97
6729	-----, 5-chloro-4'-nitro-	99
NITROSO COMPOUNDS		
4667	Aniline, N,N-dimethyl-p-nitroso-	99
3017	Benzylamine, N-cyclohexyl-N-nitroso-	83
3475	Carbazole, 3-nitro-9-nitroso-	41
3476	-----, 9-nitroso-, crude	74
3876	m-Cresol, 4-nitroso-	72
7278	Diphenylamine, 4-nitroso-	54
7109	Octanamide, N,N'-ethylenebis[N-nitroso-	36
6767	2H-1,2-Oxazine, 3,6-dihydro-4(or 5)-methyl-2-nitroso-	97
6790*	Piperazine, 2,5-dimethyl-1,4-dinitroso-	100
4402	-----, 1,4-dinitroso-	100
6084	5(4H)-Pyrazolone, 4-isonitroso-3-methyl-1-phenyl-	60
3133, 7221	4-Pyrimidinol, 2,6-diamino-5-nitroso-	-9, -48
3891	2,6-Xylenol, 4-nitroso-	76
PHENOLS		
Unsubstituted		
4265	4,4'-Biphenol, 2,2'-diallyl-	94
4655	m(and p)-Cresol, x,x'-(4,6-dimethyl-1,3-xylylene)bis-[x-(2,4-dimethylbenzyl)-]	-3
4652	-----, x,x'-(4,6-dimethyl-1,3-xylylene)di-	82
3568	o-Cresol, 4,4'-isopropylidenedi-	64
7093	p-Cresol, 2,2'-methylenebis[6-nonyl(?)]	44
4651	x-Cresol, $\alpha,\alpha'$ -(x,x-dimethyl-x-phenylene)di-	96
4565	1-Naphthol, compound with 1 f. wt. 1,3,5-trinitrobenzene	100
3375	2-Naphthol, cis-decahydro-	54
4648	-----, compound with 1 f. wt. 1,3,5-trinitrobenzene	99
4539	Phenol, o-butyl-	90
4538	-----, p-butyl-	91
3168	-----, 4-tert-butyl-2-( $\alpha$ -methylbenzyl)-	84
3567	-----, 4-tert-butyl-2-phenyl-	86

TABLE I

Code No.	Classification and Name	K Value
PHENOLS		
Unsubstituted		
4198	Phenol, <u>o</u> -cyclohexyl-	100
4192	-----, <u>p</u> -cyclohexyl-	76
4864	-----, <u>o</u> -cyclopentyl-	90
4865	-----, <u>p</u> -cyclopentyl-	84
2838, 3167	-----, <u>p</u> -( $\alpha$ , $\alpha$ -dimethylbenzyl)-	85, 67
3169	-----, <u>x</u> -( $\alpha$ -methylbenzyl)-, mixture	91
3166	-----, <u>x</u> -( $\alpha$ -methylbenzyl)-2-phenyl-	91
2840	-----, 4,4'-(1-methylpropylidene)di-	87
6277	-----, <u>x</u> -(10-methylundecyl)-	85
3570	-----, <u>p</u> -nitro-, mixture of non- $i$ isomers	64
5222	Pyrocatechol, 4,4'-(2,3-dimethyltetramethylene)di-	62
2827	-----, 4-phenyl-	67
4653	2,4-Xylenol, $\alpha^2$ , $\alpha^2'$ -(4,6-dimethyl- <u>m</u> -phenylene)bis-[4-tert-butyl-	94
4654	2,6-Xylenol, $\alpha^2$ , $\alpha^2'$ -(4,6-dimethyl- <u>m</u> -phenylene)bis-[4-tert-butyl-	44
4656	-----, $\alpha^2$ , $\alpha^2'$ -(4,6-dimethyl- <u>m</u> -phenylene)bis[4-isopropyl- $\alpha^6$ -(2,4-xylyl)-	-82
Monosubstituted		
Acids		
3423	2-Anthraic acid, 3-hydroxy-	47
6367	Benzoic acid, <u>x,x,x</u> -trihydroxy-	46
4461	2,3-Cresotic acid, 5,5'-methylenedi-	93
3287	Gentisic acid, magnesium salt	21
6369	Isophthalic acid, 2,4,5-trihydroxy-	67
3245	Phthalic acid, 3-hydroxy-	9
3067	Salicylic acid, nickel(II) salt	65
5351	silver salt	67
2835	-----, 3-phenyl-	81
2836	-----, 5-phenyl-	87
6772	Succinic acid, 4-hydroxybenzyl-	28
Alcohols		
6818	2-Biphenylmethanol, 2'-hydroxy- $\alpha$ , $\alpha$ -dimethyl-	79
4650	Phenol, <u>p</u> -(3-hydroxy-3-methylbutyl)-	93
Amides		
7059	Acetamide, 2-salicylidene-	0
6011	Acetanilide, 4'-hydroxy-	7
2914	2-Anthranilide, 3-hydroxy-	11
4425	1-Naphthalenepropionamide, <u>N</u> -cyclohexyl-2-hydroxy-	35
4937	3-Naphthamide, <u>N</u> -cyclohexyl-2-hydroxy-	81

TABLE I

Code No.	Classification and Name	K Value
PHENOOLS		
Monosubstituted		
Amides		
7052	Salicylamide	86
4465	copper(II) derivative	96
6470	-----, N-butyl-3-cyclohexyl-	50
7180	-----, N-cyclohexyl-	95
7182	-----, N-1-naphthyl-	41
5946	-----, 3-phenyl-	71
3388	Salicylanilide	50
3355	Salicylo-o-toluidide	52
Amines		
4239	9,10-Anthradiol,1,4-diamino-	0
6659	o-Cresol, 4,6-bis(1-methylheptyl)- $\alpha$ -(dimethylamino)-	84
6656	-----, 4-tert-butyl-6-cyclohexyl- $\alpha$ -(dimethylamino)-	98
6661	-----, $\alpha$ -(dimethylamino)-x-dodecyl-	94
6660	-----, $\alpha$ -(dimethylamino)-4-(1-methylheptyl)-	100
6625	-----, $\alpha$ -(dimethylamino)-4-(1,1,3,3-tetramethylbutyl)-	
6621	Phenol, 2-amino-4-arsenos-, hydrochloride	79
3994	-----, 4-anilino-2-tert-butyl-	95
6223	-----, p-(benzylamino)-	76
4814	-----, 2-tert-butyl-4-(butylamino)-	40
4346	-----, 2-tert-butyl-4-isopropyl-6-[ (dimethylamino)methyl]-	80
3262	-----, 2,4,6-triamino-, trihydrochloride	89
5412	Resorcinol, 5-amino-	95
4043	Salicylamine, N-phenyl-	63
6657	2,6-Xylenol, $\alpha$ -(diethylamino)-4-(1,1,3,3-tetramethylbutyl)-	45
6664	-----, $\alpha$ -(dimethylamino)-4-(1-methylheptyl)-	97
Halides		
3526	x,x-Biphenol, octachloro-	94
7146*	Catechol, tetrachloro-	96
3605	p-Cresol, 2,6-dibromo-	80
3619	o-Cresol, 4,6-diido-	34
3571, 7277*	Hydroquinone, tetrachloro-	80, 83
4132	2-Naphthol, 1,6-dibromo-	91
5196	x <sub>n</sub> -Phenanthrenepolyol, x <sub>n</sub> -polychloro-	29
4193	Phenol, 2-bromo-4-phenyl-	79
4870	-----, 2(and 4)-2-butenyl-4(and 2)-6-dichloro-	80
4543	-----, x-butyl-x,x,x,x-tetrachloro-	97
4262	-----, 2-chloro-4-cyclohexyl-	84
4263	-----, 4-chloro-2-cyclohexyl-	97

TABLE I

Code No.	Classification and Name	K Value
PHENOLS		
Monosubstituted		
Halides		
3165	Phenol, 4-chloro-2-( $\alpha$ -methylbenzyl)-	91
2938	-----, 4-chloro-2-phenyl-	98
2937	-----, x-chloro-2-phenyl-	99
2936	-----, x-chloro-4-phenyl-	55
4661	-----, 4,4'-cyclohexylidenebis[2,6-dichloro-	83
2977	-----, 2,4-dichloro-	76
2939	-----, 2,4-dichloro-6-phenyl-	86
4145	-----, 4,4'-isopropylidenebis[2-chloro-	87
7092	-----, 4,4'-isopropylidenebis[2,6-dichloro-	32
3C55	-----, 2,2'-methylenebis[4,6-dichloro-	86
4381	-----, 3,3'-methylenebis[2,4,6-trichloro-	51
3385, 4206	-----, pentabromo-	88, 95
4509	-----, pentachloro-, diamminecopper(II) derivative	66
4510	rosinamminecopper(II) derivative	87
3500	zinc derivative	91
4869	-----, 2,3,5,6-tetrachloro-	94
4212	-----, 2,4,6-tribromo-	58
4657	-----, 2,2'-(2,2,2-trichloroethylidene)bis[6-bromo-4-chloro-	90
4382	-----, 2,2'-(2,2,2-trichloroethylidene)bis[4,6-dichloro-	98
6471	Pyrocatechol, 4-chloro-	79
3882	Thymol, 6-chloro-	76
3407	3,5-Xylenol, 4-bromo-	74
6392	2,6-Xylenol, 4-chloro-	61
6395	3,5-Xylenol, 2,2'-methylenebis[4,6-dichloro-	25
Heterocyclic Compounds		
4399	o-Cresol, $\alpha$ -morpholino-	73
7268	Mesitol, $\alpha^2$ -( $\gamma$ -pipecolino)-, hydrochloride	95
5239	2-Naphthol, 1-(piperidinomethyl)-	99
5118	Phenol, p-(1,5-diphenyl-2-pyrazolin-3-yl)-	57
7267	2,4-Xylenol, $\alpha^2$ -( $\gamma$ -pipecolino)-, hydrochloride	91
Imides		
5394	Bicyclo[2.2.1]hept-5-ene-2,3-dicarboximide, N-(p-hydroxyphenyl)-	81
5529	Phthalimide, N-(o-hydroxyphenyl)-	44
Imines		
6775	2,2'-Binaphthalene-1,1',6,6',7,7'-hexol, 8,8'-bis(hexyl-imino)methyl-5,5'-diisopropyl-3,3'-dimethyl-	-11

TABLE I

Code No.	Classification and Name	K Value
PHENOOLS		
Monosubstituted		
Imines		
4982	<u>o</u> -Cresol, $\alpha$ -( <u>o</u> -hydroxyphenylimino)-	81
2983	-----, $\alpha$ -phenylimino-	88
4424, 4981	Phenol, <u>o</u> -benzylideneamino-	75, 83
Ketones		
3434	Acetophenone, 2',5'-dihydroxy-	19
2975	-----, <u>m</u> -hydroxy-	76
3276	-----, <u>p</u> -hydroxy-	41
4342	-----, 2',4',5'-trihydroxy-	48
3565	Benzophenone, 2,4'-dihydroxy-	52
3566	-----, 4,4'-dihydroxy-	60
2828	-----, 4-hydroxy-	48
6002	3-Buten-2-one, 4-( <u>o</u> -hydroxyphenyl)-	34
3916	Chalcone, 2,2'-dihydroxy-	42
6031	5-Fluorenone, 2-hydroxy-	55
3564	Propiophenone, <u>p</u> -hydroxy-	42
3905	Salicil	19
Nitriles		
7075	Malononitrile, <u>p</u> -hydroxybenzylidene-	96
4423	1-Naphthalenepropionitrile, 2-hydroxy-	58
Nitro Compounds		
3901	<u>m</u> -Cresol, 2,4,6-trinitro-	75
6059	Phenol, 2-cyclohexyl-4,6-dinitro-	99
2853, 4186	-----, 2,4-dinitro-6-phenyl-	<u>100</u> , 88
3900	-----, 4-isopropyl-2,6-dinitro-	83
4089	-----, <u>p</u> -(2-nitropropenyl)-	99
6244	Thymol, 2,6-dinitro-	93
3899	3,5-Xylenol, 2,4-dinitro-	67
6400	-----, 4-nitro-	83
Nitroso Compounds		
3876	<u>m</u> -Cresol, 4-nitroso-	72
3891	2,6-Xylenol, 4-nitroso-	76
Quinones		
5271	<u>p</u> -Benzoquinone, 2,5-dihydroxy-	84
2900	Quinizarin	35
Thiocyanates		
4062	Thiocyanic acid, 5- <u>tert</u> -butyl-4-hydroxy- <u>m</u> -tolyl ester	99
4056	3-ethyl-4-hydroxyphenyl ester	<u>100</u>

TABLE I

Code No.	Classification and Name	K Value
PHENOLS		
Monosubstituted		
Thiocyanates		
4061	Thiocyanic acid, 5-hydroxycarvacryl ester	91
4060	4-hydroxy-m-cumanyl ester	100
4050	p-hydroxyphenyl ester	100
4055	4-hydroxy-m-tolyl ester	100
4057	4-hydroxy-2,6-xylyl ester	93
4058	4-hydroxy-3,5-xylyl ester	100
Miscellaneous		
3705	Benzaldehyde, p-hydroxy-, thiosemicarbazone	21
3139	Benzenesulfonanilide, 2,5-dihydroxy-	46
3353	Carbanilic acid, p-hydroxy-, isopropyl ester	67
6393	m(or o)-Cumenesulfonic acid, 6(or 5)-tert-butyl- 5(4 or 6)-hydroxy-, sodium salt	55
6295	Gentisic acid, x-tert-butyl-, propyl ester	84
5221	Phenol, 2,6-dimethoxy-4-propenyl- ----, p-phenylazo-	92
4000	----, 2,2'-thiobis[4-tert-butyl-	96
2908	Phthalide, 3,3-bis(2,4,6-trihydroxy-m-tolyl)-	79
5275	Salicylaldehyde, oxime	51
7044	Urea, 1-(p-hydroxyphenyl)-1-methyl-3-phenyl-	99
5757		38
Disubstituted		
Acid-Halides		
4191, 4322	Salicylic acid, 5-bromo-	93, 90
4463	----, 5-chloro-	100
4462	----, 3,5-dichloro-	98
Alcohol-Amines		
6662	Ethanol, 2-(5-tert-butyl-2-hydroxybenzylamino)-	98
6655	----, 2,2'-(5-tert-butyl-2-hydroxybenzyl- amino)bis-	98
6702	----, 2,2'-(5-tert-butyl-2-hydroxy-3-phenyl- benzylamino)bis-	98
6654	----, 2-[5-(1,1-dimethylpropyl)-2-hydroxybenzyl- amino]-	99
6018	----, 2,2'-(p-hydroxyanilino)bis-	97
5330	----, 2-(o-hydroxybenzylamino)-	44
6649	----, 2-(2-hydroxy-3-phenylbenzylamino)-	34
		83
Alcohol-Halides		
7100, 7291*	2,2'-Methylenebis(4-chloro-6-hydroxymethylphenol)	66, 75
6248	Saligenin, 5-chloro-	90

TABLE I

Code No.	Classification and Name	K Value
PHENOOLS		
Disubstituted		
5943	Amide-Ethers	
6253	m-Anisamide, 6-hydroxy-N-methyl-	27
	Salicylo-p-phenetidide	25
Amide-Halides		
6501	Salicylamide, N-allyl-5-chloro-	99
6720	-----, N-benzyl-5-chloro-	83
6484	-----, 5-bromo-N,N-dimethyl-3-phenyl-	5
6506	-----, N-butyl-5-chloro-	99
6508	-----, N-sec-butyl-5-chloro-	98
6535, 6714	-----, N-tert-butyl-5-chloro-	99, 95
6534, 6713	-----, 5-chloro-	97, 95
6505	-----, 5-chloro-N-ethyl-	91
6717	-----, 5-chloro-N-heptyl-	96
6716	-----, 5-chloro-N-hexyl-	94
6503	-----, 5-chloro-N-isobutyl-	99
6502	-----, 5-chloro-N-isopropyl-	98
6500	-----, 5-chloro-N-methyl-	97
6718	-----, 5-chloro-N-octyl-	90
6715	-----, 5-chloro-N-pentyl-	93
6509	-----, 5-chloro-N-propyl-	98
6722	Salicylanilide, 5-chloro-	73
6780	-----, 4',5-dibromo-	75
6723	-----, 2',5-dichloro-	82
6724	-----, 3',5-dichloro-	92
6725	-----, 4',5-dichloro-	88
6726	-----, 2',5,5'-trichloro-	88
6731	Salicylo-m-toluidide, 5-chloro-	79
6730	Salicylo-o-toluidide, 5-chloro-	89
6732	Salicylo-p-toluidide, 5-chloro-	72
Amine-Ketones		
6308	Acetophenone, 3',4'-dihydroxy-2-[ (3-phenyl-	
6087	propyl)amino]-, hydrochloride	63
	3-Buten-2-one, 4-(p-hydroxy-N-methylanilino)-	37
Amine-Nitriles		
4724	Propionitrile, 3,3'-(2-hydroxynaphth-1-ylmethyl)-	58
	imino]bis-	
4481	-----, 3,3'-(5-phenylsalicylimino)bis-	74
Carbamate-Quinones		
5324	1-Anthraquinonecarbamic acid, 4-hydroxy-, methyl ester	-42
5344	pentyl ester	0

TABLE I

Code No.	Classification and Name	K Value
PHENOOLS		
Disubstituted		
5903	Ester-Ethers	
5902	Ferulic acid, ethyl ester methyl ester	29 30
2984	Ether-Imines	
4984	$\alpha$ -Cresol, $\alpha$ -( <i>p</i> -ethoxyphenylimino)- Phenol, $\alpha$ -[ ( <i>p</i> -methoxybenzylidene)amino]-	24 72
Ether-Nitro Compounds		
4088	1-Butene, 1-(4-hydroxy-3-methoxyphenyl)-2-nitro-	93
4897	Isoeugenol, $\beta$ -nitro-	83
7148*	Styrene, 4-hydroxy-3-methoxy- $\beta$ -nitro-	88
Halide-Imines		
4983	Phenol, $\alpha$ -[ ( <i>o</i> -chlorobenzylidene)amino]-	67
4985	-----, $\alpha$ -[ ( <i>p</i> -chlorobenzylidene)amino]-	71
Halide-Nitro Compounds		
4489	Phenol, 2-bromo-4- <i>tert</i> -butyl-6-nitro-	86
3390	-----, 2-chloro-4,6-dinitro-	100
4777	-----, 2,2'-(2,2,2-trichloroethylidene)bis[4-chloro- 6-nitro-	91
Halide-Sulfides		
4690	Phenol, 2,2'-thiobis[4-chloro-	95
5434	salt with 1 f. wt. dimethylamine	76
Miscellaneous		
4236	2-Anthraquinonesulfonic acid, 1,4-dihydroxy-, manganese(II) salt	68
6699	Benzoic acid, 3,5-bis[(dimethylamino)methyl]-4-hydroxy-, methyl ester	60
4320	-----, $\alpha$ -( <i>p</i> -hydroxybenzoyl)-	2
4863	d-Catechol	31
6673	$\alpha$ -Cresol, 6-bromo-4- <i>tert</i> -butyl- $\alpha$ -(dimethylamino)-	96
4427	-----, 4-chloro- $\alpha$ -morpholino-	60
4379	-----, 3,4,6-trichloro- $\alpha$ -(2,3,5-trichloro-6-methoxy- phenyl)-	42
4488	2,5-Cresotic acid, $\alpha$ -thiocyanato-	31
2978	2-Naphthoic acid, 3-hydroxy-7-sulfo-	67
4889	Phenol, $p$ -(2,4-dinitroanilino)-	9
6293	1-Propanol, 3-(4-hydroxy-3-methoxyphenyl)-	35
5534	$\gamma$ -Resorcylic acid, 4-amino-, hydrogensulfate	64

TABLE I

Code No.	Classification and Name	K Value
PHENOLS		
Disubstituted		
Miscellaneous		
5555	Rhodanine, 5-vanillylidene-	67
4260	Salicylaldehyde, 3,5-dichloro-	96
4261	oxime	94
6470	Salicylamide, N-butyl-3-cyclohexyl-5-nitro-	51
7272	Salicylic acid, 5-nitro-, ethyl ester	44
3743	-----, 2-thenyl ester	59
2979	$\alpha$ -Toluenephosphonic acid, p, $\alpha$ -dihydroxy-	40
Polysubstituted		
3975	Benzaldehyde, p-hydroxy-, (6-nitro-2-benzothiazolyl)-hydrazone	-52
5432	o-Cresol, 6,6'-thiobis[4-chloro- $\alpha$ -(dimethylamino)-	97
6674	Ethanol, 2-(3-bromo-5-tert-butyl-2-hydroxybenzylamino)-	98
6675	-----, 2-(5-tert-butyl-3-chloro-2-hydroxybenzylamino)-	100
4469	-----, 2,2,2-trichloro-1-salicylamido-	80
4866	Flavanone, d-3,3,4,5,7-pentahydroxy-	28
4120	2,7-Naphthalenedisulfonic acid, 3-(p-aminophenylazo)-4,5-dihydroxy-, disodium salt	23
2800	2-Naphthamide, 1,2,3,4-tetrahydro-6-hydroxy-4-(4-hydroxy-3-methoxyphenyl)-3-hydroxymethyl-7-methoxy-, from $\alpha$ -conidendrin	18
5389	Naringenin	34
5233	Propiophenone, 3-chloro-4'-hydroxy-3'-methoxy-	77
6309	Protocatechual alcohol, $\alpha$ -[1-(p-methoxyphenyl)-2-propylaminomethyl]-, hydrochloride	89
5908	Pyruvic acid, (4-hydroxy-3-methoxyphenyl)-, oxime	27
5528	-----, (4-hydroxy-3-methoxyphenyl)-2-thio-	71
6719	Salicylamide, 5-chloro-N-(2-hydroxyethyl)-	84
6721	-----, 5-chloro-N-(3-hydroxypropyl)-	94
6727	Salicylanilide, 5-chloro-2'-nitro-	95
6728	-----, 5-chloro-3'-nitro-	97
6729	-----, 5-chloro-4'-nitro-	99
6472	Salicylic acid, 5-bromo-3-phenyl-, 2-(diisopropylamino)-ethyl ester, hydrochloride	71
6487	-----, 5-iodo-3-phenyl-, 2-(diisopropylamino)ethyl ester, hydrochloride	65
PHOSPHORUS COMPOUNDS		
Phosphates, ortho-		
6972	Isooctyl phosphate, dibutyltin	60

TABLE I

Code No.	Classification and Name	K Value
PHOSPHORUS COMPOUNDS		
Phosphates, ortho-		
3108	Phosphoric acid, bis(5- <u>tert</u> -butyl-2-biphenylyl) p- <u>tert</u> -butylphenyl ester	11
3090	bis(o-chlorophenyl) phenyl ester	93
5236	bis(3,5,5-trimethylhexyl) ester	90
3091	o-chlorophenyl diphenyl ester	92
2880	2-(2,4-dichlorophenoxy)ethyl diethyl ester	78
2885	diethyl 2-(1-naphthyl)ethyl ester	83
2883	diethyl 1-naphthylmethyl ester	74
2852	tris(2-biphenylyl) ester	45
3092	tris(p- <u>tert</u> -butylphenyl) ester	50
4187	tris(o-chlorophenyl) ester	91
4110	tris(2,3-dibromopropyl) ester	92
3946	tris(pentachlorophenyl) ester	<u>100</u>
Phosphites		
5677	Orthophosphorous acid, bis[2-(2-thiocyanatoethoxy)-ethyl] ester	82
7297	Phosphorous acid, aryl dialkyl esters	15
2878	2,4-dichlorobenzyl diethyl ester	85
2884	diethyl 2-(1-naphthyl)ethyl ester	80
Phosphonates		
5084	Phosphonic acid, 2-cyanoethyl-, dihexyl ester	98
5083	dimethyl ester	26
6385	-----, diimide, N,N'-bis(5-chloro-2-pyrimidinyl)-P-phenyl-	43
2876, 3875	-----, ethylenedi-, tetraethyl ester	87
5235	-----, 9-fluorenyl-, dimethyl ester	55
2877	-----, 1-naphthylmethyl-	68
2881	diethyl ester	80
5678	-----, (2,2,3-trichloro-1-hydroxybutyl)-, bis[2-(2-thiocyanatoethoxy)ethyl] ester	84
5679	-----, (2,2,2-trichloro-1-hydroxyethyl)-, bis[2-(2-thiocyanatoethoxy)ethyl] ester	84
4464	$\alpha$ -Toluenephosphonic acid, o-chloro- $\alpha$ -hydroxy-, diethyl ester	84
4885	-----, 2,4-dichloro-	85
4887	diethyl ester	78
4886	-----, 3,4-dichloro-	67
2879	diethyl ester	74
2980	-----, 2,4-dichloro- $\alpha$ -hydroxy-, diethyl ester	74
2979	-----, p, $\alpha$ -dihydroxy-	86
2996	-----, $\alpha$ -hydroxy-m-nitro-, diethyl ester	50
		81

TABLE I

Code No.	Classification and Name	K Value
PHOSPHORUS COMPOUNDS		
Phosphonium Compounds		
Phosphonium compounds.		
3699	butyltriphenyl----- iodide	95
3701	dodecyltriphenyl----- bromide, 50 percent in alcohol	96
3698	ethyltriphenyl----- iodide	92
3700	hexyltriphenyl----- bromide	90
3697	methyltriphenyl----- iodide	85
5387	tetrakis(hydroxymethyl)----- chloride	83
3548	tetraphenyl----- bromide	70
3558	tetraphenyl----- iodide	100
3138	triphenyl(triphenylmethyl)----- chloride	100
Thiophosphates		
6377*	Phosphorotetrathioic acid, trimethyl ester	87
7301	Phosphorotrithioic acid, O,S,S'-trimethyl ester	99
3878	Thiophosphoric acid, O,O'-bis(p-tert-pentylphenyl) ester	86
2882	-----, O,O'-diethyl O"-I-naphthylmethyl ester	(T)
2893	-----, O,O',O"-tris(p-nitrophenyl) ester	-39
Miscellaneous		
6569*	Phosphine oxide, tris(1-aziridinyl)-	100
3760	-----, tris(o-chlorophenyl)-	10
6450*	Phosphine sulfide, tris(1-aziridinyl)-	93
3877	-----, trithiobis[di-m-tolylxy-	92
2997	Phosphonothioic acid, phenyl-, ethyl(o-nitrophenyl) ester	100
2998	ethyl(p-nitrophenyl) ester	100
5289	Phosphorohydrazidic acid, 2-phenyl-, diethyl ester	74
7184	Phosphorothioic triamide, N,N',N"-tricyclohexyl-	40
7042	-----, triamide, N,N',N"-tridodecyl-	30
3704	Pyrophosphoramido, octamethyl-	(T)
QUATERNARY NITROGEN COMPOUNDS		
Ammonium Compounds		
Ammonium compounds.		
4222	alkyltrimethyl----- chloride (alkyl=C <sub>8</sub> H <sub>17</sub> -C <sub>18</sub> H <sub>37</sub> )	84
4223	alkyltrimethyl----- chloride (alkyl=approx. C <sub>12</sub> H <sub>25</sub> )	90
4226	alkyltrimethyl----- chloride (alkyl=approx. C <sub>18</sub> H <sub>37</sub> )	91
4221	alkyltrimethyl----- p-dodecylbenzenesulfonate (alkyl=C <sub>8</sub> H <sub>17</sub> -C <sub>18</sub> H <sub>37</sub> )	89

TABLE I

Code No.	Classification and Name	K Value
QUATERNARY NITROGEN COMPOUNDS		
Ammonium Compounds		
	Ammonium compounds.	
4224	alkyltrimethyl----- p-dodecylbenzenesulfonate (alkyl=approx. C <sub>12</sub> H <sub>25</sub> )	93
4225	alkyltrimethyl----- p-dodecylbenzenesulfonate (alkyl=approx. C <sub>18</sub> H <sub>37</sub> )	95
3456	alkyltrimethyl----- p-(1-methylbutyl)benzenesulfonate (alkyl=approx. C <sub>12</sub> H <sub>25</sub> )	95
3457	alkyltrimethyl----- p-(1-methylbutyl)benzenesulfonate (alkyl=approx. C <sub>18</sub> H <sub>37</sub> )	95
5892	allyl(x-dodecylbenzyl)diethyl----- hexafluorophosphate	97
4501	benzylbis(2-hydroxyethyl)dodecyl----- chloride	90
4503	benzylbis(2-hydroxyethyl)hexadecyl----- chloride	98
4502	benzylbis(2-hydroxyethyl)tetradecyl----- chloride	98
3357	benzyl(carboxymethyl)dimethyl----- chloride, tetradecyl ester	94
4483	benzyl(4,4-dibenzoyl-2,2-dimethylbutyl)dimethyl----- chloride	97
4482	benzyl(2,2-dimethyl-5-oxo-3-undecenyl)dimethyl----- chloride	91
3270	benzyldimethylphenyl----- chloride	75
4718	benzyldimethyl[2-[2-[p-(1,1,3,3-tetramethylbutyl)- phenoxy]ethoxy]ethyl]----- thiocyanate	98
4025	benzyldodecyldimethyl----- benzenesulfonate	96
6564	benzyldodecyldimethyl----- 1-dodecanesulfonate	89
6563	benzyldodecyldimethyl----- methanesulfonate	95
3872	benzyldodecyldimethyl----- x-toluenesulfonate	68
5357	benzylhexadecyldimethyl----- hexafluorophosphate	82
4334	benzyl(2-hydroxyethyl)methyl[2-[2-[x-(1,1,3,3-tetra- methylbutyl)phenoxy]ethoxy]ethyl]----- chloride	97
3980	benzyltrimethyl----- p-toluenesulfonate	38
4506	bis(2-hydroxyethyl)(2,4-dichlorobenzyl)hexa- decyl----- chloride	97
4507	bis(2-hydroxyethyl)(3,4-dichlorobenzyl)hexa- decyl----- chloride	88
4504	bis(2-hydroxyethyl)(2,4-dichlorobenzyl)tetra- decyl----- chloride	99
4505	bis(2-hydroxyethyl)(3,4-dichlorobenzyl)tetra- decyl----- chloride	99
4743	[4-[ <u>o</u> -chlorophenyl][p-dimethylamino]phenyl]methyl- ene]-2,5-cyclohexadienylidene]dimethyl----- chloride	98
5420	decamethylenebis[(2-hydroxyethyl)dimethyl----- bromide	53
5423	decamethylenebis[bis(2-hydroxyethyl)methyl----- bromide	33

TABLE I

Code No.	Classification and Name	K Value
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## QUATERNARY NITROGEN COMPOUNDS

## Ammonium Compounds

	Ammonium compounds.	
5894*	di(x-dodecenyl)dimethyl----- chloride	93
5895*	di(x-dodecenyl)dimethyl----- chloride, aqueous	98
4348	dimethyl[(didodecyl) and (ditetradecyl)]----- chloride, 75 percent in isopropyl alcohol	89
4349	dimethyl[(dihexadecyl) and (dioctadecyl)]----- chloride, 75 percent in isopropyl alcohol	63
5896	(x-dodecylbenzyl)trimethyl----- chloride	81
5356	(x-dodecylbenzyl)trimethyl----- hexafluorophosphate	92
6552*	(p-dodecylphenyl)triethyl----- sulfate	99
3871	dodecyltrimethyl----- benzenesulfonate	96
4357	dodecyltrimethyl----- chloride	83
4352	dodecyltrimethyl----- chloride, 50 percent in isopropyl alcohol	97
3870	dodecyltrimethyl----- p-chlorobenzenesulfonate	93
3869	dodecyltrimethyl----- p-fluorobenzenesulfonate	89
3868	dodecyltrimethyl----- m-nitrobenzenesulfonate	82
3867	dodecyltrimethyl----- p-toluenesulfonate	87
6566	ethylmethyl[2-[2-(p-octylphenoxy)ethoxy]ethyl]-l-dodecanesulfonate	82
6401*	ethylenebis[(aminocarbonylmethyl)dimethyl[x-(1-methylheptyl)benzyl]----- chloride	89
6545	hexadecyl(2-hydroxyethyl)methyl(2,3,4,5,6-pentahydroxyhexyl)----- bromide	84
5545	hexadecyl[2-[(p-methoxybenzyl)-2-pyrimidinyl-amino]ethyl]dimethyl----- bromide	82
4354	hexadecyltrimethyl----- chloride	92
5419	pentamethylenebis[(2-hydroxyethyl)dimethyl----- iodide, diacetate	53
3978	tetramethyl----- p-cyclohexylbenzenesulfonate	87
4350	trimethyl[(dodecyl) and (tetradecyl)]----- chloride	92
4351	trimethyl[(dodecyl) and (tetradecyl)]----- chloride, 50 percent mixture in isopropyl alcohol	95
4353	trimethyl[(hexadecyl) and (x-octadecenyl)]----- chloride	90
4347	trimethyl[(x,x-octadecadienyl) and (x-octadecenyl)]----- chloride	91
4355	trimethyl[(x,x-octadecadienyl) and (x-octadecenyl)]----- chloride, 50 percent mixture in isopropyl alcohol	94
3862	trimethyloctadecyl----- benzenesulfonate	86
4356	trimethyloctadecyl----- chloride, in isopropyl alcohol	91
3863	trimethyloctadecyl----- p-chlorobenzenesulfonate	82
3866	trimethyloctadecyl----- p-fluorobenzenesulfonate	88
3864	trimethyloctadecyl----- m-nitrobenzenesulfonate	85
3865	trimethyloctadecyl----- p-toluenesulfonate	95

TABLE I

Code No.	Classification and Name	K Value
QUATERNARY NITROGEN COMPOUNDS		
Ammonium Compounds		
3512	Ammonium compounds.	
4331	trimethylphenyl----- methyl sulfate	73
4333	trimethyl[2-[2-[x-(1,1,3,3-tetramethylbutyl)-phenoxy]ethoxy]ethyl]----- bromide	89
5552	Glycine, [2-[2-[p-(1,1,3,3-tetramethylbutyl)phenoxy]-ethoxy]ethyl]betaine	60
	d-Thioneine	12
Heterocyclic Compounds		
5395	Benzothiazolium compounds.	
6998*	2,3-dimethyl----- methyl sulfate	92
7000*	Imidazolium compounds.	
7138*	1(or 3)-benzyl-2-coco-1-(2-hydroxyethyl)-2----- chloride, 60 percent in isopropyl alcohol	92
7005	1(or 3)-benzyl-x-heptadecen-2-yl-1-(2-hydroxyethyl)-2----- chloride, 60 percent in isopropyl alcohol	92
3416	3-benzyl-1-methyl-2-undecyl----- bromide	99
4020	1(or 3)-4-chlorobutyl)-x-heptadecen-2-yl-1-(2-hydroxyethyl)-2----- chloride, 60 percent in isopropyl alcohol	97
6546	Isoquinolinium compounds.	
3949	2-dodecyl----- p-toluenesulfonate	95
6544	Lepidinium compounds.	
6542	1-isopentyl- $\alpha$ -[1-isopentyl-4(1H)-quinolylidene]-	
6568	----- iodide	-6
6567*	Morpholinium compounds.	
6565*	4-benzyl-4-[ (2,5,8,11,14,17,20-heptamethyl-3,6,9,12,-15,18,21-heptoxo-23-hydroxy)tetracosyl]----- chloride	74
3981	4,4-bis(2-hydroxyethyl)----- chloride	-5
3950	4-(2-carboxyethyl)-4-x-octadecenyl----- betaine	5
2776	4-(2,3-epoxypropyl)-4-hexadecyl----- chloride	72
2751	4-ethyl-4-hexadecyl----- 1-dodecanesulfonate	76
2804	4-ethyl-4-hexadecyl----- methanesulfonate	93
2807	4-ethyl-4-hexadecyl----- p-toluenesulfonate	94
2741	4-methyl-4-pentyl----- benzenesulfonate	16
2742	4,4'-oxydiethylenebis[4-(2-hydroxyethyl)]----- chloride	-77
2784	Nicotinium compounds.	
	b: -(3,4-dichlorobenzyl)----- dichloride	75
	dtb: 'vl----- dibromide	42
	didode: 'l----- dipicrate	87
	diethylenebis----- dibromide	93
	dimethyl----- dibromide	7
	dimethyl----- diiodide	53
	dimethyl----- di-p-toluenesulfonate	52

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Code No.	Classification and Name	K Value
QUATERNARY NITROGEN COMPOUNDS		
Heterocyclic Compounds		
Picolinium compounds.		
3420	1-dodecyl-2----- p-toluenesulfonate	94
4251	1-methyl-2----- iodide	77
3419	1-dodecyl-3----- p-toluenesulfonate	80
3418	1-dodecyl-4----- p-toluenesulfonate	93
Piperazinium compounds.		
6554	1,4-didodecyl-1,4-diethyl----- bis(ethyl sulfate)	96
6634	1,4-diethyl-1,4-dihexadecyl----- bis(ethyl sulfate)	48
Piperidinium compounds.		
3356	1-carboxymethyl-1-methyl----- chloride, tetradecyl ester	93
6302	1-ethyl-3-hydroxy-1-methyl----- bromide, benzilic acid ester	86
Pseudoindolium compounds.		
4744	2-[4-[(2-chloroethyl)ethylamino]-2-methylstyryl]- 1,3,3-trimethyl-3H----- chloride	99
4742	2-[p-[(2-chloroethyl)methylamino]styryl]-1,3,3- trimethyl-3H----- chloride	87
4719	2-[2-(2,4-dimethoxyanilino)vinyl]-1,3,3-trimethyl-3H- ----- chloride	66
4740	1,3,3-trimethyl-2-[2-[[2-methylbenzothiazol-5(or 6)-yl]- amino]vinyl]-3H----- chloride	90
4741	1,3,3-trimethyl-2-[2-(2-methyl-1-indolyl)vinyl]-3H- ----- chloride	90
4746*	1,3,3-trimethyl-2-[2-(1-methyl-2-phenyl-3-indolyl)- vinyl]-3H----- chloride	100
Pyridinium compounds.		
3613	1-(carboxymethyl)----- chloride, hydrazide	100
6317	1-(6-chloro-3-phenanthrylcarbonylmethyl)----- bromide	-36
3799	1-(2,4-dinitrophenyl)----- chloride	87
3417	1-dodecyl-2,4-dimethyl----- p-toluenesulfonate	97
3661	1-[2-(dodecylthio)ethyl]----- chloride	97
4122	1-methyl-2-(3-phenyl-1,3-butadienyl)----- methyl sulfate, polymer	58
3665	1-[2-(octylthio)ethyl]----- chloride	97
3979	1-pentyl----- benzenesulfonate	88
Pyrrolidinium compounds.		
2748	1-benzyl-1-methyl-2-(3-pyridyl)----- thiocyanate	89
2744	1-butyl-1-methyl-2-(3-pyridyl)----- thiocyanate	92
2727	1-butyl-1-methyl-2-(3-pyridyl)----- p-toluenesulfonate	97
2747	1-(o-chlorobenzyl)-1-methyl-2-(3-pyridyl)----- thiocyanate	93

TABLE I

Code No.	Classification and Name	K Value
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## QUATERNARY NITROGEN COMPOUNDS

## Heterocyclic Compounds

	Pyrrolidinium compounds.	
2745	1-(2,4-dichlorobenzyl)-1-methyl-2-(3-pyridyl)-----chloride	90
2746	1-(3,4-dichlorobenzyl)-1-methyl-2-(3-pyridyl)-----chloride	80
2740	1,1-dimethyl-2-(3-pyridyl)-----bromide	62
6518*	1-dodecyl-1-ethyl-2,5-dimethyl-----ethyl sulfate	93
2753	1-dodecyl-1-methyl-2-(3-pyridyl)-----chloride	84
2805	1-dodecyl-1-methyl-2-(3-pyridyl)-----oleate	88
2786	1-dodecyl-1-methyl-2-(3-pyridyl)-----p-toluene-sulfonate	83
6553	1-ethyl-2,5-dimethyl-----ethyl sulfate	100
2752	1,1'-ethylenabis[1-methyl-2-(3-pyridyl)]-----bromide	94
6549	1-hexadecyl-1-methyl-----methyl sulfate	71
2731	1-hexadecyl-1-methyl-2-(3-pyridyl)-----bromide	94
2725	1-hexadecyl-1-methyl-2-(3-pyridyl)-----thiocyanate	100
2785	1-hexadecyl-1-methyl-2-(3-pyridyl)-----p-toluene-sulfonate	85
2749	1-methyl-1-octyl-2-(3-pyridyl)-----iodide	92
2750	1-methyl-1-octyl-2-(3-pyridyl)-----thiocyanate	85
	Quinolinium compounds.	
6069	4-chloro-2-[p-(dimethylamino)phenyliminomethyl]-6-methoxy-1-methyl-----chloride	89
3415	1-dodecyl-----p-toluenesulfonate	89
	Thiamorpholinium compounds.	
6550, 6551	4-hexadecyl-4-methyl-----methyl sulfate	83, 96

## QUINONES

5052	Acetamide, N-2-anthraquinonyl-	58
7067	Antraquinone, 1-amino-----, 1-benzamido-4-chloro-	40
3274	-----, 2-chloro-	7
3910	-----, 2-ethyl-	18
2899	1-Anthraquinonecarbamic acid, 4-hydroxy-, methyl ester	79
5324	pentyl ester	42
5344	1-Anthraquinonecarboxylic acid	0
3401	2-Anthraquinonesulfonic acid, sodium salt	30
3255	p-Benzoquinone, 2,5-bis(2-pyridylamino)-	7
6697	-----, 2,6-dichloro-	21
3630	-----, 2,5-dihydroxy-	67
5271	-----, p-ethoxyphenyl-	84
4131	-----, tetrabromo-	52
3438		17

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Code No.	Classification and Name	K Value
QUINONES		
7285	Chloranil	37
3222	Diphenoquinone, octachloro-	94
3127	1,4-Naphthoquinone, 2-methoxy-	85
5510	-----, imine, 2-amino-, monohydrochloride	100
2900	Quinizarin	35
3129	p-Quinone, 2,5-bis(1,1,3,3-tetramethylbutyl)-	13
2974	Thymoquinone	91
SEMICARBAZIDES		
5797	Semicarbazide, 2-(?-hydroxyethyl)-	93
7113	-----, 1-maleoyl-	55
7192	-----, 1-phenyl-	81
SEMICARBAZONES		
Unsubstituted		
3836	Acetophenone, semicarbazone	25
5277	2-Butanone, semicarbazone	99
5278	Cyclohexanone, semicarbazone	100
4179	2,4-Pentadienal, semicarbazone	10
5793	Semioxamazide	84
Substituted		
5786, 7193	2-Furaldehyde, semicarbazone	88, 99
2796	-----, 5-nitro-, semicarbazone	37
2799	semioxamazone	85
6696	Ketone, methyl 5-nitro-2-furyl, semicarbazone	97
3856	2-Thiophenecarboxaldehyde, semicarbazone	73
SULFAMIDES		
6705	Sulfamide, N'-antipyrinyl-N,N-dimethyl-	71
6706	-----, N'-2-biphenyl-N,N-dimethyl-	71
6409	-----, N,N'-bis(1,1,3,3-tetramethylbutyl)-	40
SULFANILAMIDES		
4855	Acetanilide, p-(N-cyanosulfamoyl)-, N <sup>4</sup> -calcium salt	51
6292	1,3-Propanedisulfonic acid, 1-phenyl-3-(p-sulfamoyl-anilino)-, disodium salt	17
6643	Pyrazine, 2,3-bis(N <sup>4</sup> -acetylsulfanilamido)-5,6-di-methyl-	62

TABLE I

Code No.	Classification and Name	K Value
SULFANILAMIDES		
3922	Sulfanilamide	43
7183	-----, N <sup>4</sup> -(bromoacetyl)-	38
6668	-----, N <sup>1</sup> -(5-bromo-2-pyrimidinyl)-	80
6240	-----, N <sup>1</sup> -(3,4-dimethyl-5-isoxazolyl)-	14
6709	-----, N <sup>1</sup> -(5,5-dimethyl-2-thiazolin-2-yl)-	35
6386	-----, N <sup>4</sup> -methylene-N <sup>1</sup> -2-thiazolyl-, sodium derivative	12
6479	-----, N <sup>1</sup> -(6-methyl-3-pyridazinyl)-	25
6974	-----, N <sup>1</sup> -2-pyridyl-	44
3923, 7069	-----, N <sup>1</sup> -2-thiazolyl-	20, <u>88</u>
6068	Sulfanil-p-anisidine, N <sup>4</sup> -(1-sulfoethyl)-2'-(1-sulfoethylamino)-, disodium salt, tetrahydrate	24
3645	4'-(2-Thiazolylsulfamoyl)phthalanilic acid	24
SULFENAMIDES		
3118, 3506		51, <u>89</u>
7292*		52
3119	2-Benzothiazolesulfenamide, N-cyclohexyl- 2-Thiazoleethylsulfenamide, N,N-dipentyl-	<u>88</u>
SULFIDES		
Monosulfides		
5147	Acetamide, N-butyl-2-(pentachlorophenylthio)-	51
3047	Acetic acid, [(2-benzothiazolyl)thio]-	89
4753	-----, chloro-, diester with 4,4'-thiodiphenol	90
5146	-----, pentachlorophenylthio-, methyl ester	80
4304	Acetophenone, 2-benzylthio-	55
4112	Benzenesulfonic acid, thiol-, phenyl ester	71
5045	Benzothiazole, 2-[(3-butenyl)thio]-	87
4298, 4857	Butyronitrile, 2-hydroxyethyl-4-(methylthio)-	93, <u>87</u>
4530*	Carbamic acid, dimethyldithio-, <u>tert</u> -butylthio ester	99
7129	Coumarin, 3,3'-thiobis[4-hydroxy-	64
5432	o-Cresol, 6,6'-thiobis[4-chloro-a-(dimethylamino)-	97
7105	Cyclohexanone, 2-[(p-chlorophenyl)thio]-	97
3641	Ethanol, 2-[(2-benzothiazolyl)thio]-	97
3410	-----, 2,2'-(decamethylenedithio)di-	61
3691	Ether, pentachlorophenyl 2-(phenethylthio)ethyl	83
6647	Glyoxal, bis(dimethylthio acetal)	96
6645	Hydantoin, 5-phenyl-5-(phenylthiomethyl)-	73
5990	Hydroxypropionitrile, 3-(butylthio)-	88
3654	Melamine, N <sup>2</sup> ,N <sup>4</sup> ,N <sup>6</sup> -tris(2-benzothiazolylthiomethyl)-	3
3297, 7117	Methane, bis(p-chlorophenylthio)-	71, <u>94</u>
3317	-----, bis(dodecylthio)-	<u>-131</u>
2908	Phenol, 2,2'-thiobis[4- <u>tert</u> -butyl-	79

TABLE I

Code No.	Classification and Name	K Value
SULFIDES		
Monosulfides		
4690	Phenol, 2,2'-thiobis[4-chloro-	95
5434	salt with 1 f. wt. dimethylamine	76
3712	Phthalimide, 1,2,3,6-tetrahydro-, N-trichloromethylthio-	57
7269	2-Pipecoline, 1-(5-methyl-2-methylthiobenzyl)-,	
	hydrochloride	63
4717	Propionic acid, 3,3'-thiodi-, bis(1-methylheptyl) ester	55
4716	dibutyl ester	65
4715	diethyl ester	65
3233	Propionitrile, 3-(p-chlorophenylthio)-	97
3756	-----, 3,3'-thiodi-	68
5705	Pseudourea, 2,2'-(thiodimethylene)bis[2-thio-,	
	dihydrochloride	97
	Pyridinium compounds.	
3661	1-[2-(dodecylthio)ethyl]----- chloride	97
3665	1-[2-(octylthio)ethyl]----- chloride	97
4046	Sulfide, bis[(2-nitro-1-phenyl)ethyl]	28
4038	-----, bis[(2-nitro-1-phenyl)propyl]	99
7104	-----, p-chlorobenzyl 2-thienyl	93
5951	-----, 2-chlorocyclohexyl 2,4-dinitrophenyl	36
7116	-----, 2-chloroethyl phenyl	98
3241	-----, dibenzoyl	-7
7211	-----, ethyl p-tolyl	55
6970	Tin, bis(butylthio)didodecyl-	56
6969*	-----, dibutylthioxo-	
4339	s-Triazine, 2,4-diamino-6-(methylthio)-	100
		100
Polysulfides		
4883	Benzoic acid, 2,2'-dithiodi-, bis(2,4-dichlorobenzylidene-hydrazide)	19
4882	dihydrazone, dihydrochloride	90
7055	Disulfide, bis(2-amino-5-sulfamoylphenyl)	69
3787	-----, bis(p-chlorophenyl)	0
3040	-----, bis(o-nitrophenyl)	27
7219	-----, bis(5-nitroquinol-8-yl)	11
5388	-----, dibenzyl	85
3788	-----, di-p-tolyl	63
5561	Ethanol, 2,2'-dithiodi-, bis(p-nitrobenzoate)	27
3362	Piperidine, 1,1'-[dithiobis(1-methylethylene)]di-,	
	dihydrochloride	93
3023	Tetrasulfide, bis(benzenesulfonyl)	-20
3653	Trisulfide, bis(morpholinothiocarbonyl)	34

TABLE I

Code No.	Classification and Name	K Value
SULFINIC ACIDS		
3945	Benzenesulfinic acid, p-chloro-, sodium salt	<u>89</u>
SULFONAMIDES		
Unsubstituted		
7054	Benzenesulfonamide	89
7195	<u>o</u> -Toluenesulfonamide	<u>85</u>
7061	<u>p</u> -Toluenesulfonamide	<u>71</u>
3323	<u>o</u> (and <u>p</u> )-Toluenesulfonamide, <u>N</u> -ethyl-, 60 percent p-isomer	73
3724	<u>p</u> -Toluenesulfonanilide, <u>N</u> -allyl-	24
5035	<u>p</u> -Toluenesulfono-p-toluidide	44
Substituted		
3644	Acetanilide, 4'-sulfamoylthiazol-2-yl-	-35
5040	-----, 2,2,2-trichloro-4'-sulfamoyl-	91
3016	Benzearsonic acid, p-(4-biphenylylsulfamoyl)-	100
3013	-----, p-morpholinylsulfonyl-	81
3014	-----, p-(1-piperidylsulfonyl)-	56
3011	-----, p-sulfamoyl-	77
4491	Benzenesulfonamide, <u>N,N</u> -bis(2-cyanoethyl)-	91
3137	-----, 2,5-dimethoxy-	81
2859	-----, p-1-pyrrolyl-	51
3015	Benzenesulfonanilide, 4-arsenoso-	45
3139	-----, 2,5-dihydroxy-	46
4413	p-Benzenesulfonotoluidide, 4-bromo-	88
5889	1,2-Benzothiazol-3-one, 2-methyl-, 1,1-dioxide	42
4799	d-Camphorsulfonamide, <u>N</u> -butyl-	73
7055	Disulfide, bis(2-amino-5-sulfamoylphenyl)	69
4932	Ethanol, 2-(2-chloro-3,5-dinitrobenzenesulfonamido)-	93
2860	D-Glucoanilide, p-sulfamoyl-	-21
6690	Hexanilide, 4'-sulfamoyl-	59
5660	2-Imidazoline, 1-[2-(3,4-dichlorobenzensulfonamido)-ethyl]-2-[(3,4-dichlorobenzyl)thio]-	54
3012	Morpholine, 4-(p-arsenosophenylsulfonyl)-	60
3964	-----, 4-(p-chlorophenylsulfonyl)-	29
3963	-----, 4-(3,4-dichlorophenylsulfonyl)-	74
6704	-----, 4,4'-sulfonyldi-	68
6708	4-Morpholinesulfonamide, <u>N,N</u> -dimethyl-	66
6315	Phthalanilic acid, 4'-(acetylsulfamoyl)-, dihydrate	21
6707	1-Piperidinesulfonamide, <u>N,N</u> ,2-trimethyl-	93
5433	<u>p</u> -Toluenesulfonamide, <u>N</u> -methyl- <u>N</u> -(9-oxo-2-fluorenyl)-	24
5089	<u>p</u> -Toluenesulfonanilide, 3-chloro- <u>N</u> -(2-cyanoethyl)-	84

TABLE I

Code No.	Classification and Name	K Value
SULFONAMIDES		
Substituted		
5935	s-Triazine, 2-amino-4-benzenesulfonamido-6-phenyl-	15
5694	-----, 4-amino-6-benzenesulfonamido-2-phenyl-	40
SULFONES		
Unsubstituted		
7188	Phenyl sulfone	74
3795	Thianaphthene, 1,1-dioxide	84
5527	Thiophene, 2,5-dihydro-, 1,1-dioxide	85
5872	-----, 2,5-dihydro-3-methyl-, 1,1-dioxide	85
Substituted		
3776	Acetonitrile, benzenesulfonyl-	71
6636	Aniline, 3-chloro-4,4'-sulfonyldi-	81
6637	-----, N-propyl-4,4'-sulfonyldi-	75
6239	-----, 4,4'-sulfonyldi-	47
2921	o-Anisidine, 5-(ethylsulfonyl)-	32
4563	Benzaldehyde, p-ethylsulfonyl-, 2-benzoxazolylhydrazone	-7
6635	Benzamidine, p-(methylsulfonyl)-, monohydrochloride	63
4112	Benzenesulfonic acid, thiol-, phenyl ester	71
3293	Benzoic acid, p,p'-sulfonyldi-, dibutyl ester	-22
5754	Butyric acid, 4-(2-formamidoethylsulfonyl)-	27
5337	-----, 4,4'-(trimethylenedisulfonyl)di-	-10
5130	4,4'-Ditolyl sulfone, 3,3'-diacetamido-	39
6703	Dodecylamine, N-[p-(sulfanilyl)phenyl]-	-20
6638	Nicotinanilide, 4'-sulfanilyl-	64
5046	Phenol, 4,4'-sulfonyldi-, diacetate	62
3616	Phenoxythiain, 10,10-dioxide	80
3780	Propionitrile, 3-benzenesulfonyl-	26
6291	Pyridine, 5-amino-2-sulfanilyl-	77
6639	Succinanilic acid, 4'-[p-(2,5-dimethyl-1-pyrrolyl)-phenylsulfonyl]-	53
4835	Sulfone, bis(p-chlorophenyl)	87
4809	-----, tert-butyl 2-chloroethyl	97
3458	-----, 2-chloroethyl dodecyl	19
3315	-----, 2-chloroethyl phenethyl	100
3231	-----, p-chlorophenyl cyanomethyl	91
3023	Tetrasulfide, bis(benzenesulfonyl)	-20
7073	Thianaphthene, 2-bromo-, 1,1-dioxide	86
7072	-----, 2,3-dibromo-2,3-dihydro-, 1,1-dioxide	92
2920	m-Toluidine, 6-ethylsulfonyl-, $\alpha,\alpha,\alpha$ -trifluoro-	71

TABLE I

Code No.	Classification and Name	K Value
SULFONIC ACIDS		
Unsubstituted		
3177	Benzenesulfonic acid, x-dodecyl-, hexylamine salt	40
3087	4-Biphenylsulfonic acid, sodium salt	35
6837	Butanesulfonic acid, sodium salt	-68
6394	x-Naphthalenesulfonic acid, x,x-diisopropyl-, sodium salt	78
Substituted		
3255	2-Anthraquinonesulfonic acid, sodium salt	7
4236	-----, 1,4-dihydroxy-, manganese(II) salt	70
5558	Benzenediazonium compounds.	
7198	4,4'-vinylenebis[3-sulfo----- chloride	-4
5550	Benzenesulfonic acid, p-(4,5-dihydro-3-methyl-5-oxopyrazol-1-yl)-	51
4002	-----, p-hydrazino-	58
3479	Benzoic acid, 4-nitro-2-sulfo-, potassium- (sulfonate) salt	16
4248	2-Benzothiazolesulfonic acid, calcium salt	55
3450	2,2'-Biphenyldisulfonic acid, 4,4'-diamino-	-130
3439	3,3'-Biphenyldisulfonic acid, 4,4'-diamino-	79
6393	d-10-Camphorsulfonic acid	70
4012	<u>m</u> (or o)-Cumenesulfonic acid, 6(or 5)- <u>tert</u> -butyl-5(4 or 6)-hydroxy-, sodium salt	55
5295	Isethionic acid	-19
5391	Metanilic acid, 6-(p-aminoanilino)-	50
4120	Methanesulfonic acid, hydroxy-, sodium salt	36
6414	2,7-Naphthalenedisulfonic acid, 3-(p-aminophenylazo)-4,5-dihydroxy-, disodium salt	23
6413	1,5-Naphthalenedisulfonic acid, 4-(2-mercpto-4,4,6-tri-methyl-1(4H)-pyrimidinyl)-	59
3273	2-Naphthalenesulfonic acid, 5-(2-mercpto-4,4,6-tri-methyl-1(4H)-pyrimidinyl)-	23
4023	1,3,6-Naphthalenetrdisulfonic acid, 8-amino-, di-sodium salt	6
2978	Naphthionic acid, sodium salt	14
7253	2-Naphthoic acid, 3-hydroxy-7-sulfo-	67
6292	Phenol, 2,4-dichloro-, benzenesulfonate	74
4751*	1,3-Propanedisulfonic acid, 1-phenyl-3-(p-sulfamoyl-anilino)-, disodium salt	17
6068	2-Pyrazoline-3-carboxylic acid, 5-oxo-1-(o-sulfo-phenyl)-4-(o-sulfophenylazo)-, salt with 2 f. wt. dicyclohexylamine	100
	Sulfanil-p-aniside, N <sup>4</sup> -(1-sulfoethyl)-2'-(1-sulfo-ethylamino)-, disodium salt, tetrahydrate	24

TABLE I

Code No.	Classification and Name	K Value
SULFONIC ACIDS		
Substituted		
2919	Sulfanilic acid, N,N-dimethyl-	62
6757	Succinamic acid, <u>N</u> -( <u>tert</u> -butylcarbamoyl)-2(or 3)-sulfo-, sodium salt, dodecyl ester	56
6756	isopropyl ester	43
6755	methyl ester	66
6754	-----, <u>N</u> -carbamoyl-(2 or 3)-sulfo-, sodium salt, dodecyl ester	-16
6753	methyl ester	-27
6412	<u>m</u> -Toluenesulfonic acid, 6-(2-mercaptop-4,4,6-trimethyl-1( <u>H</u> )-pyrimidinyl)-	50
6391	<u>o</u> -Toluic acid, $\alpha$ -hydroxy- $\alpha$ -sulfo-, $\gamma$ -lactone, copper(II) salt	60
5761	<u>s</u> -Triazine, 2,4-diamino-6-(3-sulfopropyl)-, sodium salt	45
SULFONIC ACID ESTERS		
5230	Benzenesulfonic acid, <u>p</u> -chloro-, <u>p</u> -bromophenyl ester	66
5228	<u>p</u> -chlorophenyl ester	71
5229	2,4-dichlorophenyl ester	28
5410	-----, <u>p</u> -methoxy-, <u>p</u> -chlorophenyl ester	51
2794	$\alpha$ -Conidendrin, di- <u>p</u> -toluenesulfonate	22
2795	$\beta$ -Conidendrin, di- <u>p</u> -toluenesulfonate	15
6836	Sulfonic acid, trichlorovinyl-, x,x,x-trichloroethyl ester	82
SULFONYL HALIDES		
3828	4,4'-Biphenyldisulfonyl difluoride	-30
4316	$\beta$ -Styrenesulfonyl chloride, <u>p</u> -nitro-	46
SULFOXIDES		
3436	Ethanol, 2,2'-sulfinyl-di-	-44
2858	Phenothiazine, 5-oxide	-11
2849, 4202	Phenoxathiin, 10-oxide	<u>96</u> , <u>99</u>
3272	Sulfoxide, 2-chloroethyl 2,4-dinitrophenyl	<u>93</u>
5822	-----, dimethyl	<u>29</u>
THIOAMIDES		
4833*	Acetamide, ( <u>N,N</u> -dimethyl)thio-	92
4834	-----, ( <u>N</u> -methyl)thio-	100
3792, 7060	Acetanilide, thio-	<u>90</u> , <u>89</u>

TABLE I

Code No.	Classification and Name	K Value
THIOAMIDES		
7080	Benzanilide, thio-	89
5322	Carbohydrazide, 3-thio-1-thiocarbamoyl-	69
3723	Morpholine, 4-(2-naphthylthioacetyl)-	78
3725	-----, 4-[ (5,6,7,8-tetrahydro-2-naphthyl)thioacetyl]-	32
4484	Oxamide, N,N'-didodecyldithio-	48
3737	Thioxanilone nitrile	-9
THIOCARBAMATES		
Unsubstituted		
3204	Carbamic acid, cyclohexylthio-, O-ethyl ester	94
7287	-----, dibenzylidithio-, zinc salt	47
6971	-----, dibutylidithio-, dibutyltin(IV) salt	78
3022	-----, dicyclohexylidithio-, dicyclohexylammonium salt	79
3966	-----, diethyldithio-, anhydrosulfide with p-chloro-thiolbenzenesulfonic acid	96
3049	benzyl ester	94
3952	copper(II) salt	50
3953	mercury(II) salt	72
3954	sodium salt	69
2990	-----, dimethyldithio-, copper(II) salt	100
7288	zinc salt	83
3221	-----, N,N'-ethylenebis[N-butyldithio-, zinc salt	22
5948	-----, ethylenebis[dithio-, bismuth(III) salt	65
3096	nickel(II) salt	67
5481	-----, ethylthio-, S-phenyl ester	94
4529	-----, 2-naphthyldithio-, ammonium salt	99
5949	-----, (3,5,5-trimethylhexyl)dithio-, zinc salt	91
4335	Carbanilic acid, dithio-, methyl ester	93
3298	-----, thio-, O-allyl ester	88
5814	2-Oxazolidinethione, 4-ethyl-	88
3662	1-Piperidinecarbodithioic acid, 1-piperidinium salt	88
5812	2-Thiazolidinethione, 4,4-dimethyl-	98
5549	-----, 3-(2-ethylbutyl)-	96
5548	-----, 3-isopropyl-	100
5547	-----, 5-methyl-	99
Substituted		
5145	Acetic acid, dibutylidithiocarbamoyl-, p-chloro-phenyl ester	72
5142	ethyl ester	84
5145	-----, (N,N-diethyldithiocarbamoyl)-	80

TABLE I

Code No.	Classification and Name	K Value
THiocarbamates		
Substituted		
5144	Acetic acid, diethyldithiocarbamoyl-, p-chloro-phenyl ester	100
5140	ethyl ester	90
3970	2-(pentachlorophenoxy)ethyl ester	97
5141	----, dimethyldithiocarbamoyl-, butyl ester	92
5143	ethyl ester	65
3655	----, [(1-piperidyl)carbodithio]-	83
3643	Carbamic acid, (2-aminoethyl)dithio-	77
3960	----, bis(2-hydroxyethyl)dithio-, copper(II) salt	90
3961	mercury(II) salt	-16
4528	----, o-bromophenyldithio-, ammonium salt	99
3219	----, N-(2-cyanoethyl)-N-2-[(2-cyanoethyl)amino]-ethyl dithio-	63
3906	----, N-(2-cyanoethyl)-N-ethyldithio-, zinc salt	74
3968	----, diethyldithio-, diester with 2,2'-oxydiethane-thiol	95
3050	2,4,6-trichlorobenzyl ester	96
4530*	----, dimethyldithio-, tert-butylthio ester	99
7090	2-(2,4-dichlorophenoxy)ethyl ester	73
7103	2-thienyl ester	96
4031	m-toluidinomethyl ester	100
7091	2-(p-tolyloxy)ethyl ester	49
4146	----, 3,3-dinitro-1,5-pentamethylenebis[thio-, diphenyl ester	-15
5444	----, dithio-, ethylenebis-S,S'-bis(2-bromoethoxy-carbonyl)	83
6451	[2-(2-thioxoimidazolidin-1-yl)ethyl]-, sodium salt, trihydrate	71
3216	----, ethylenebis[N-(2-cyanoethyl)dithio-, copper(II) salt	29
3056	disodium salt	47
3057	zinc salt	70
5659	----, thio-, 2-[2-(octadecylthio)-2-imidazolin-1-yl]-ethyl-, 3,4-dichlorobenzyl ester, hydrobromide	35
6763	----, thiol-, maleimidomethyl-, butyl ester	99
5138	Carbamoyl chloride, diethylthio-	95
3058	Cyclohexanecarbamic acid, N-2-(cyclohexylamino)-ethyl dithio-	57
3660	Hydrosulfamine, N-cyclohexyl-S-(1-piperidylthiocarbonyl)-	82
3956	4-Morpholinecarbodithioic acid, copper(II) salt	-118
3967	diester with 2,2'-oxydiethanethiol	63
3962	2-hydroxyethyl ester	49
3957	mercury(II) salt	92
3958	sodium salt	91

TABLE I

Code No.	Classification and Name	K Value
THIOCARBAMATES		
Substituted		
3969	Morpholinocarbodithioic acid, ester with 2-(pentachlorophenoxy)ethyl mercaptoacetate	78
4073*	2H-1,3,5-Thiadiazine-2-thione, tetrahydro-3,5-dimethyl-1,3,4-Thiadiazole, 2,5-bis(diethyldithiocarbamoyl)-	94
5139	2-Thiazolidinethione, 3-ethylcarbamoyl-	45
5456	Rhodanine, 5-(3,4-dichlorobenzylidene)-	95
4471	-----, 3,3'-hexamethylenebis-	86
5457	-----, 5-vanillylidene-	15
5555		67
THIOCARBOHYDRAZIDES		
5321	Carbohydrazide, 1-carbamoyl-3-thio-	21
5323	-----, 3-thio-	(T)
5322	-----, 3-thio-1-thiocarbamoyl-	69
THIOCARBONATES		
5508	Acetic acid, di-, trithiocarbonate ester	80
4059	Benzimidazole, 2-[(ethoxycarbonyl)thio]-	97
5170	Carbonic acid, thiol-, <u>S</u> -allyl <u>O</u> -pentachlorophenyl ester	88
4048	-----, trithio-, bis(2-benzimidazolyl) ester	86
5488	cyclic ester with ethylene glycol	97
4552*	Carbazic acid, dithio-, ammonium salt	97
4553	methyl ester	(T)
4714	Xanthic acid, butyl-, ester with mercaptoacetic acid, calcium salt	86
4235	-----, <u>sec</u> -butyl-, potassium salt	80
6466	zinc salt	33
4418	-----, <u>tert</u> -butyl-, arsenic(III) salt	97
6390	-----, cyclohexyl-, zinc salt	56
4109	-----, ethyl-, anhydrosulfide with <u>O</u> -ethylthiol-carbonate	96
3209	2,4,6-trichlorobenzyl ester	96
6241	zinc salt	-17
6242	-----, isopropyl-, lead(II) salt	89
6243	zinc salt	-6
7295	Xanthogen disulfide, dibutyl-	86
3052	-----, diethyl-	91
THIOCARBOXYLATES		
5455	2-Imidazolidinethione, 1-methyldithiocarbonyl-	91

TABLE I

Code No.	Classification and Name	K Value
THiocarboxylates		
7213	Quinoline, 5-acetamido-8-thioacetyl-	60
6762	Succinimide, $\alpha$ -acetoxymethio-N-carbamoyl-x-pentyl-	64
Thiocyanates and Isothiocyanates		
Unsubstituted		
4531	Isothiocyanic acid, 2-naphthyl ester	100
5287	phenyl ester	99
2970	Thiocyanic acid, dodecyl ester	91
3851	p-phenylenedimethylene ester	40
Monosubstituted		
Esters		
5674	Acetic acid, thiocyanato-, 1,3-dimethylbutyl ester	93
5668	Benzoic acid, thiocyanatomethyl ester	99
5663	Dodecanoic acid, thiocyanatoethyl ester	75
5673	Octanoic acid, 2-thiocyanatoethyl ester	33
5672	Propionic acid, 3-thiocyanato-, ethyl ester	65
5671	methyl ester	77
Ethers		
5675	Ethane, 1,2-bis(2-thiocyanatoethoxy)-	96
3959, 5661	Ether, bis(2-thiocyanatoethyl)	51, 89
5662*	-----, 2-butoxyethyl 2-thiocyanatoethyl	98
5664	-----, 2-(p-octylphenoxy)ethyl 2-thiocyanatoethyl	85
3797	-----, phenyl 2-thiocyanatoethyl	79
Halides		
4527	Isothiocyanic acid, x-bromophenyl ester	100
5442*	m-chlorophenyl ester	97
3859	Thiocyanic acid, 2,3,4,5,6-pentachlorocyclohexyl ester	90
Phenols		
4062	Thiocyanic acid, 5-tert-butyl-4-hydroxy-m-tolyl ester	99
4056	3-ethyl-4-hydroxyphenyl ester	100
4061	5-hydroxycarvacryl ester	91
4060	4-hydroxy-m-cumaryl ester	100
4050	p-hydroxyphenyl ester	100
4055	4-hydroxy-m-tolyl ester	100
4057	4-hydroxy-2,6-xylyl ester	93
4058	4-hydroxy-3,5-xylyl ester	100
Miscellaneous		
5670	Acetanilide, 4'-thiocyanato-	81

TABLE I

Code No.	Classification and Name	K Value
THIOCYANATES AND ISOTHIOCYANATES		
Monosubstituted		
	Miscellaneous	
7115	Benzothiazole, 2-thiocyanato-	80
6759*	Maleimide, <u>N</u> -thiocyanatomethyl-	<u>99</u>
5680*	Thiocyanic acid, p-(dimethylamino)phenyl ester, salt with toluenesulfonic acid	99
3682	2,4-dinitrophenyl ester	68
3796	phenacyl ester	83
Polysubstituted		
3965	Acetic acid, thiocyanato-, 2-(pentachlorophenoxy)- ethyl ester	85
5676	Butanal, 3-chloro-, bis[2-(2-thiocyanatoethoxy)- ethyl] acetal	87
4488	2,5-Cresotic acid, $\alpha$ -thiocyanato-	<u>31</u>
5677	Orthophosphorous acid, bis[2-(2-thiocyanatoethoxy)- ethyl] ester	82
5667	Phenetole, p-chloro- $\beta$ -thiocyanato-	<u>100</u>
5666	-----, 4-(1-methylheptyl)-x-nitro- $\beta$ -(2-thiocyanato- ethoxy)-	80
5665	-----, 2-nitro-4-tert-pentyl- $\beta$ -thiocyanato-	98
5678	Phosphonic acid, (2,2,3-trichloro-1-hydroxybutyl)-, bis[2-(thiocyanatoethoxy)ethyl] ester	84
5679	-----, (2,2,2-trichloro-1-hydroxyethyl)-, bis[2-(2- thiocyanatoethoxy)ethyl] ester	84
5669	Thiocyanic acid, 3-chloro-4-(dimethylamino)phenyl ester	<u>100</u>
2843	2-thenoylmethyl ester	83
3842	Thiophene, 5-chloro-2-(1,2-dithiocyanatoethyl)-	55
THIOLS		
6019	Acetanilide, 2-mercaptop-	83
5117	Acetic acid, [(2-amino-5-ethoxyphenyl)thio]-	31
5213	Benzanethiol, pentachloro-	66
4881	Benzoic acid, $\alpha$ -mercaptop-, 2,4-dichlorobenzylidene- hydrazide	10
6233	Benzothiazole, 6-amino-2-mercaptop-	92
3690, 5458	-----, 5-chloro-2-mercaptop-	75, 89
3590	-----, 2-phenylmercurithio-	75
3021	2-Benzothiazolethiol, compound with cyclohexylamine	79
3326	copper(II) derivative	45
3921, 7286	zinc derivative	35, 0
3033	-----, 4-phenyl-	-34
3648	2-Benzoxazolethiol	73

TABLE I

Code No.	Classification and Name	K Value
THIOOLS		
3688	Carbanilic acid, 2-mercaptopethyl ester	80
5994	Isobarbituric acid, 5-thio-	47
3592	Mercury, (dodecylthio)phenyl-	-11
3591	-----, phenyl(phenylthio)-	94
3593	-----, phenyl(tetradecylthio)-	87
5097	Propionitrile, 3-(p-tolylthio)-	90
4682	2-Pyridinethiol, 1-oxide, sodium derivative	100
3663	2-Quinolinethiol	89
4554	4H-1,3,4-Thiadiazine-2-thiol, 5-phenyl-	99
6473	1,2,4-Thiadiazole, 3,5-bis(ethylmercurithio)-	65
3647	1,3,4-Thiadiazole-2,5-dithiol	42
4052	6H-1,3-Thiazine-2-thiol, 4,6,6-trimethyl-, copper(I) derivative	19
6510*	sodium derivative	96
6511	zinc derivative	97
7106	4H-1,2,4-Triazole, 4-amino-3-hydrazino-5-mercaptop-	96
5521	Valine, N-acetyl-3-mercaptop-	34
THIONES		
5528	Pyruvic acid, (4-hydroxy-3-methoxyphenyl)-2-thio-	71
THIOSEMICARBAZIDES		
7037	Semicarbazide, 4-phenyl-3-thio-	96
THIOSEMICARBAZONES		
3706	Acetanilide, p-formyl-, thiosemicarbazone	37
5929	Acetoacetic acid, thiosemicarbazone, ethyl ester	100
5818	p-Anisaldehyde, thiosemicarbazone	76
3703	Benzaldehyde, p-(dimethylamino)-, thiosemicarbazone	25
3705	-----, p-hydroxy-, thiosemicarbazone	21
3898	-----, p-nitro-, thiosemicarbazone	76
3635	Mucochloric acid, thiosemicarbazone	68
THIOUREAS		
Unsubstituted		
4053	2-Benzimidazolethiol, copper(II) derivative	96
4054	zinc derivative	92
4135	Biurea, 2,5-dithio-	24
7218	2-Imidazolethiol, 1-ethyl-	83
2775	2-Imidazolidinethione	66

TABLE I

Code No.	Classification and Name	K Value
THIOUREAS		
Unsubstituted		
3646	2-Imidazolidinethione, 1,3-diphenyl-	5
3218	2-Imidazolidinone, 2-thio-	54
4487*	2-Imidazoline, 2-dodecylthio-	89
5637	hydrobromide	83
5653	-----, 2,2'-ethylenedithiobis-, dihydrobromide	20
5655	-----, 2-[ [2-(imidazolin-2-ylthio)-1-vinyethyl]thio]-, dihydrochloride	88
5641	-----, 2-octadecylthio-	62
5639	-----, 2-tetradecylthio-, hydrobromide	24
5638	-----, 2-[ (5,5,7-trimethyl-2-octenyl)thio]-, hydrochloride	97
5630*	Pseudoureia, 2-allyl-2-thio-, compound with ethylenebis(thiocarbamic acid)	98
5631*	compound with 6-(1-methylheptyl)-2,4-dinitrophenol	96
5629	hexafluosilicate	85
5691*	hydrochloride	98
3551	-----, 2-benzyl-2-thio-, acetate	100
3553	crotonate	94
5359*	hexafluorophosphate	67
3549, 3550	hydrochloride	86
3552	myristate	85
3547	picrate	92
3557	propionate	99
3554	succinate	80
3555	p-toluate	100
5706	-----, 2,2'-bis[2-thio-, dipicrate	94
5450	-----, 2,2'-(2-butylene)bis[2-thio-, dihydrobromide	81
3597	-----, 2-butyl-2-thio-, hydrobromide	83
3695	hydroiodide	94
3702	-----, 2-sec-butyl-2-thio-, hydroiodide	94
5690	-----, 2-decyl-2-thio-, hydrobromide	99
5711	-----, 1,3-dibutyl-2-octadecyl-2-thio-, hydrobromide	96
5709	-----, 1,3-dimethyl-2-octadecyl-2-thio-, hydrobromide	99
5712	-----, 1,3-dimethyl-2-octyl-2-thio-, hydrobromide	90
5713	-----, 1,3-dimethyl-2-tetradecyl-2-thio-, hydrobromide	91
5697	-----, 1,3-diphenyl-2-propenyl-2-thio-, hydrobromide	79
5708	-----, 2-dodecyl-1,3-dimethyl-2-thio-, hydrochloride	98
5692	salicylate	95
3599	-----, 2-dodecyl-2-thio-, hydrobromide	85
3598, 5633	hydrochloride	95, 87
3481, 7216	-----, 2-ethyl-2-thio-, hydrobromide	76
3693	hydroiodide	86
3559	-----, 2-heptyl-2-thio-, hydrobromide	92

TABLE I

Code No.	Classification and Name	K Value
THIOUREAS		
Unsubstituted		
5628	Pseudourea, 2-hexadecyl-2-thio-, compound with 6-hexyl-2,4-dinitrophenol	84
3596	hydroiodide	73
3696	-----, 2-isobutyl-2-thio-, hydrobromide	96
3818	hydroiodide	85
3694	-----, 2-isopropyl-2-thio-, hydrobromide	93
3556	-----, 2-methyl-2-thio-, hydroiodide	81
3482	sulfate	85
3483	-----, 2-pentyl-2-thio-, hydrobromide	97
3600	-----, 2-propyl-2-thio-, hydrobromide	85
3726	hydroiodide	95
5696	-----, 2-tetradecyl-2-thio-, hydrobromide	88
5710*	-----, 1,2,3-tributyl-2-thio-, hydrobromide	99
6465	2-Pyrimidinethiol, 1,1'-(4,4'-biphenylene)bis[1,4-di- hydro-4,4,6-trimethyl-	67
6407	-----, 1-(2-cyclohexylcyclohexyl)-1,4-dihydro-4,4,6- trimethyl-	84
6404	-----, 1-cyclohexyl-1,4-dihydro-4,4,6-trimethyl-	38
6246	-----, 1,4-dihydro-1,4,4,6-tetramethyl-	96
4047	-----, 1,4-dihydro-4,4,6-trimethyl-	93
6467	-----, 1,4-dihydro-4,4,6-trimethyl-1-phenyl-	78
6463	-----, 1,4-dihydro-4,4,6-trimethyl-1-o-tolyl-	30
6247	-----, 1,1'- <i>p</i> -phenylenebis[1,4-dihydro-4,4,6-trimethyl- 2(1 <i>H</i> )-Pyrimidinethione, 5,6-dihydro-4,6-dimethyl-	29
3657	6-thioureido-	85
6462	-----, 3,4-dihydro-4,4,6-trimethyl-1-(1-naphthyl)-	27
6464	-----, 1,1'- <i>m</i> -phenylenebis[3,4-dihydro-4,4,6-trimethyl-	3
5149	Urea, 1-allyl-3-dodecyl-2-thio-	93
5150	-----, 1-allyl-3-octadecyl-2-thio-	46
3306	-----, 1-allyl-2-thio-	98
6468	-----, 1,1'-(4,4'-biphenylene)bis[2-thio-	4
6402	-----, 1-(2-biphenyl)-2-thio-	(T)
5736	-----, 1-butyl-3-dodecyl-2-thio-	48
5950	-----, 1- <i>tert</i> -butyl-3-(1,2,3,4,4a,9a-hexahydro-1,4- methanofluoren-2-yl)-2-thio-	77
4534	-----, 1-coco-2-thio-	100
5449	-----, 1-cyclohexyl-3-ethyl-2-thio-	96
3180	-----, 1,3-di(2-biphenyl)-2-thio-	52
4707	-----, 1,3-didodecyl-2-thio-	62
2780	-----, 1,3-diethyl-2-thio-	94
2778	-----, 1,1-dimethyl-2-thio-	75
3361	-----, 1,3-di(1-naphthyl)-2-thio-	42
6245	-----, 1,3-di(2-naphthyl)-2-thio-	74
5735	-----, 1-dodecyl-3-ethyl-2-thio-	73

TABLE I

Code No.	Classification and Name	K Value
THIOUREAS		
Unsubstituted		
5734	Urea, 1-dodecyl-3-methyl-2-thio-	84
4706	-----, 1-dodecyl-3-phenyl-2-thio-	99
4232	-----, 1-dodecyl-2-thio-	100
4533	----- technical grade	100
2781	-----, 1,1'-ethylenabis[3-ethyl-2-thio-	72
2779	-----, 1-ethyl-2-thio-	82
2777	-----, 1-methyl-2-thio-	76
5148	-----, 1-octadecyl-3-phenyl-2-thio-	79
5148	-----, 1,1'-(p-phenylene)bis[2-thio-	34
2782	-----, 1,1'-tetramethylenebis[3-ethyl-2-thio-	42
3601	-----, 2-thio-, hydrochloride	80
Monosubstituted		
Acids		
5258	Acetic acid, (2-imino-4-oxo-5-thiazolidinyl)-	-5
3639	-----, (5-pseudothiohydantoinyl)-	-45
3850	salt with cyclohexylamine	78
3849	salt with di-cyclohexylamine	83
3848	salt with hexadecylamine	58
3468	sodium salt	5
Alcohols		
5658	Ethanol, 2-[(2-imidazolinyl)thio]-, hydrochloride	74
5632	Pseudourea, 2-[(2-hydroxyethyl)thio]-, complex with ethylene glycol and hydrochloric acid	82
2783	Urea, 1-ethyl-3-(2-hydroxyethyl)-2-thio-	81
Amides		
5648	Acetamide, 2-[(2-imidazolin-2-yl)thio]-, picrate	96
5635	2-Pseudoureaacetamide, 2-thio-, hydrochloride	60
3484	2-Pseudoureaspropionamide, 2-thio-, hydrochloride	40
Amines		
5520	Pseudourea, 2-(2-aminoethyl)-2-thio-, dihydro-bromide	92
7215	-----, 2-[(diethylamino)ethyl]-2-thio-, dihydro-chloride	88
5704*	-----, 2-[2-(dimethylamino)ethyl]-2-thio-, di-hydrochloride	98
Esters		
3467	Acetic acid, (5-pseudothiohydantoinyl)-, 2-ethyl-hexyl ester	25

TABLE I

Code No.	Classification and Name	K Value
THIOUREAS		
Monosubstituted		
	Esters	
5634	Pseudourea, 2-ethoxycarbonyl-2-thio-, picrate	98
3707	4-Thiazolecarboxylic acid, 2-amino-, ethyl ester	55
	Ethers	
5123, 5396	Benzothiazole, 2-amino-5,6-dimethoxy-	100
3366	-----, 2-(p-methoxyanilino)-	100
5654	Ether, bis[2-[1-propionyl-2-imidazolin-2-yl]thio]-ethyl]	70
4750	2-Imidazoline, 2,2'-ethylenebis(oxyethylenethio)di-, dihydrochloride	71
5431	-----, 1-(methoxymethyl)-2-(methoxymethylthio)-	50
5657	-----, 2-[2-[2-(p-octylphenoxy)ethoxy]ethyl]thio-, hydrochloride	85
5656	-----, 2-[2-(2-phenoxyethoxy)ethyl]thio-	76
5707	Pseudourea, 1,2-dimethyl-2-thio-1-(2-vinyloxyethyl)-, hydroiodide	99
4748	-----, 2-[2-[p-(1,1,3,3-tetramethylbutyl)phenoxy]-ethyl]-thio-, hydrobromide	100
	Halides	
5642*	2-Imidazoline, 2-[(o-chlorobenzyl)thio]-, hydrochloride	98
5643*	-----, 2-[(p-chlorobenzyl)thio]-, hydrochloride	97
5650	-----, 2-[(2,4-dichlorobenzyl)thio]-, picrate	89
5645	-----, 2-[(3,4-dichlorobenzyl)thio]-, 3,4-dichlorophenylsulfinate	98
5646	fluosilicate	88
5649	picrate	93
5644	thiocyanate	89
5451	Pseudourea, 2-(p-chlorobenzyl)-2-thio-, hydrobromide	95
5623	-----, 2-(2,4-dichlorobenzyl)-2-thio-, complex with crotonic acid	100
5625*	complex with 3,5-dichlorophenoxyacetic acid	99
5249	hydrochloride	97
5636	-----, 2-(3,4-dichlorobenzyl)-1,1-diphenyl-2-thio-, hydrochloride	60
5622	-----, 2-(3,4-dichlorobenzyl)-2-thio-, complex with formic acid	92
5626*	complex with 2-furoic acid	99
5624	complex with heptanoic acid	100
5627*	-----, 2-(3,4-dichlorophenyl)-2-thio-, complex with 1,2-ethanebis(thiocarbamic acid)	92
7089	-----, 2-pentachlorobenzyl-2-thio-, hydrochloride	98

TABLE I

Code No.	Classification and Name	K Value
THIOUREAS		
Monosubstituted		
Halides		
7095	Urea, 1-( <i>p</i> -chlorophenyl)-3-methyl-2-thio-	100
5486	-----, 1-( <i>m</i> -chlorophenyl)-2-thio-	<u>100</u>
Sulfonic Acids		
6414	1,5-Naphthalenedisulfonic acid, 4-(2-mercaptop-4,4,6-trimethyl-1( <i>H</i> )-pyrimidinyl)-	59
6413	2-Naphthalenesulfonic acid, 5-(2-mercaptop-4,4,6-trimethyl-1( <i>H</i> )-pyrimidinyl)-	23
6412	<i>m</i> -Clenenesulfonic acid, 6-(2-mercaptop-4,4,6-trimethyl-1( <i>H</i> )-pyrimidinyl)-	50
Miscellaneous		
6451	Carbamic acid, dithio-, [2-(2-thioxoimidazolidin-1-yl)-ethyl]-, sodium salt, trihydrate	71
5250	Hydantoin, 5,5-dimethyl-2,4-dithio-	99
5455	2-Imidazolidinethione, 1-methyldithiocarbonyl-	<u>91</u>
5995	Pseudourea, 2-(1,2,3,4-tetrahydro-2,4-dioxo-5-pyrimidinyl)-2-thio-, hydrochloride	44
5705	-----, 2,2'-(thiodimethylene)bis[2-thio-, dihydrochloride	97
7121	4-Thiazolidinone, 5-ethyl-2-imino-	73
3038	-----, 2-imino-	76
3039	-----, 3-phenyl-2-phenylimino-	-13
5345	4-Thiazolidone, 3-butyl-2-butylimino-	99
6403	Urea, 1,3-di(2-pyridyl)-2-thio-	<u>96</u>
Polysubstituted		
5659	Carbamic acid, thio-, 2-[2-(octadecylthio)-2-imidazolin-1-yl]ethyl-, 3,4-dichlorobenzyl ester, hydrobromide	35
5695	Ethanol, 2-(2,6-diamino-s-triazin-4-ylthio)-	46
5454	Glycolic acid, [(4,5-dihydro-2-imidazolythio)-, hydrochloride	48
5652	2-Imidazoline, 2-[ (6-chloro-1,3-benzodioxan-8-yl)-methylthiol]-	76
5651	hydrochloride	89
5698	-----, 2-[2-(2-chloroethoxy)ethylthio]-	93
5430	hydrochloride	<u>87</u>
5660	-----, 1-[2-(3,4-dichlorobenzenesulfonamido)ethyl]-2-[ (3,4-dichlorobenzyl)thio]-	54
5647	Imidazole, 4,5-dihydro-1-(2-aminoethyl)-2-[ (3,4-dichlorobenzyl)thio]-, dihydrochloride	88
5036	5-Pyrimidinecarboxylic acid, 1,2,3,4-tetrahydro-4-oxo-2-thioxo-, ethyl ester	<u>88</u>

TABLE I

Code No.	Classification and Name	K Value
THIOUREAS		
Polysubstituted		
5552	d-Thioneine	12
4490	s-Triazine, 2,2'-[oxybis(ethylenethio)]bis[4,6-diamino-	25
6411	Urea, 1-(1,1-dimethyl-3-oxobutyl)-3-(p-nitrophenyl)-	
	2-thio-	78
6410*	-----, 3-(2-hydroxyethyl)-1-(1,1-dimethyl-3-oxobutyl)-	
	2-thio-	98
THIURAMS		
5452	Disulfide, bis[(2-acetamidoethyl)thiocarbamoyl]	66
3179	-----, bis(cyclohexylmethylthiocarbamoyl)	50
3955	-----, bis(diethylthiocarbamoyl)	91
3041, 4208	-----, bis(dimethylthiocarbamoyl)	<u>100</u> , <u>100</u>
4537, 7290	-----, bis(isopropylmethylthiocarbamoyl)	<u>100</u> , <u>83</u>
4039	-----, N,N'-ethylenabis[(2-cyanoethyl)thiocarbamoyl]	99
3217	-----, N,N'-ethylenabis[N-cyclohexylthiocarbamoyl]	43
3220	Sulfide, bis(cyclohexylmethylthiocarbamoyl)	49
3677	-----, bis(dimethylthiocarbamoyl)	12
7296*	-----, bis(dibutylthiocarbamoyl)	84
4049	-----, bis(dicyclohexylthiocarbamoyl)	99
3676	-----, bis(1-piperidylthiocarbonyl)	68
4076	Trisulfide, bis(dimethylthiocarbamoyl)	100
3653	-----, bis(morpholinothiocarbonyl)	34
TIN COMPOUNDS		
6971	Carbamic acid, dibutyldithio-, dibutyltin(IV) salt	78
6972	Iooctyl phosphate, dibutyltin	60
6970	Tin, bis(butylthio)diodecyl-	56
6372*	-----, dibutyldifluoro-	99
6376*	-----, dibutylloxo-	90
6969*	-----, dibutylthioxo-	100
6975	-----, dichlorodi(4-morpholinobutyl)-	77
5998	-----, difluorodimethyl-	98
6954	-----, tetracyclohexyl-	40
6963	-----, tetraphenyl-	5
UREAS		
Unsubstituted		
4665	Carbanilide, N,N'-diethyl-	84
3267	-----, 2,2',4,4',6,6'-hexaethyl-	-28

TABLE I

Code No.	Classification and Name	K Value
UREAS		
Unsubstituted		
4324	Glycoluril	27
6398	2-Imidazolidinone, 1,3-bis(3,5,5-trimethylhexyl)-	89
4325	2-Imidazolidone	48
4467	2(3H)-Imidazolone, 4,5-diphenyl-	100
4704, 5873	2,4(1H,3H)-Quinazolininedione	83, 84
7166	-----, 3-butyl-	92
3330	Urea, compound with $\frac{1}{4}$ f. wt. boron trifluoride	5
3464	dihydrogen phosphate	74
5875	-----, 3-allyl-1,1-dimethyl-	95
3299	-----, 1-allyl-3-phenyl-	86
7139	-----, 1-benzyl-3-triphenylmethyl-	33
6448	-----, 1,3-bis(1,1,3,3-tetramethylbutyl)-	3
5446	-----, 1-cyclohexyl-3-(2-ethylhexyl)-	57
5447	-----, 1,1'-( <u>m</u> -phenylene)bis[3,3-dimethyl-	18
Monosubstituted		
Acids		
6752	Maleamic acid, <u>N</u> -carbamoyl-	53
5012	5-Pyrimidinecarboxylic acid, 1,2,3,4-tetrahydro-2,4-dioxo-, monohydrate	33
Alcohols		
4327	Glycoluril, 1,3,4,6-tetrakis(hydroxymethyl)-	57
6396	2-Imidazolidinone, 1-(2-hydroxyethyl)-	-37
Amines		
5794	Hydantoin, 1-amino-, monohydrochloride	87
6397	2-Imidazolidinone, 1-(2-aminoethyl)-	6
2911	Uracil, 6-amino-	28
2912	-----, 5,6-diamino-, salt with $\frac{1}{2}$ f. wt. sulfuric acid	27
4942	Urea, cyclohexylaminomethyl-	84
Esters		
6747	Fumaramic acid, <u>N</u> -carbamoyl-, methyl ester	82
6746	Maleamic acid, <u>N</u> -carbamoyl-, dodecyl ester	19
6742	-----, methyl ester	84
6749	-----, <u>N</u> -(tert-butylcarbamoyl)-, isopropyl ester	87
6748	-----, methyl ester	79
Ethers		
4300	Carbanilide, 2-methoxy-	45
4476	2-Imidazolidone, 1,3-bis(methoxymethyl)-	21

TABLE I

Code No.	Classification and Name	K Value
UREAS		
Monosubstituted		
Ethers		
4479	1,3,5,4H-Oxadiazin-4-one, 3,5-bis(butoxymethyl)-tetrahydro-	75
3271	Urea, (3-chloromercuri-2-methoxypropyl)-	69
Halides		
5886	Carbanilide, 4,4'-dichloro-	-41
3453	Glycoluril, 1,3,4,6-tetrachloro-3a,6a-diphenyl-	64
5888	Hydantoin, 1,3-dibromo-5,5-dimethyl-	68
5885	-----, 1,3-dichloro-5,5-dimethyl-	97
5887	Urea, (p-chlorophenyl)-	80
Heterocyclic Compounds		
5947	Urea, 1-(3,5-diethyl-4H-1,2,4-triazol-4-yl)-3-p-tolyl-	56
5945	-----, 1-(3,5-dimethyl-4H-1,2,4-triazol-4-yl)-3-phenyl-	51
5112*	-----, 1-phenyl-3-(2-thiazolyl)-	99
5172	-----, 1H-tetrazol-5-yl-	32
Miscellaneous		
4015	Allantoin	16
5276	Alloxan	40
5280	Alloxanthine	33
6631	Barbituric acid, 5-ethyl-1-phenyl-	46
3544	Bis(acetoureidophenyl)iodonium iodide	69
6645	Hydantoin, 5-phenyl-5-(phenylthiomethyl)-	73
5994	Isobarbituric acid, 5-thio-	47
7102	Isocyamuric acid, triphenyl-	88
7220	Phenacylurea	-116
5995	Pseudourea, 2-(1,2,3,4-tetrahydro-2,4-dioxo-5-pyrimidinyl)-2-thio-, hydrochloride	44
2981	Urea, amidino-, monosulfate	82
5757	-----, 1-(p-hydroxyphenyl)-1-methyl-3-phenyl-	38
Polysubstituted		
6743	Fumaramic acid, N-carbamoyl-, 2-chloroethyl ester	65
6744	2-nitrobutyl ester	57
2910	Hydrouracil, 6-imino-5-isonitroso-	-35
3459	"cyanuric acid, trichloro-	97
6758	Maleamic acid, N-carbamoyl-, 2-hydroxyethyl ester	52
6745	2-(p-octylphenoxy)ethyl ester	74
7110	Semicarbazide, 1-(p-chlorobenzoyl)-	18
6757	Succinamic acid, N-(tert-butylcarbamoyl)-2(or 3)-sulfo-, sodium salt, dodecyl ester	56

TABLE I

Code No.	Classification and Name	K Value
UREAS		
Polysubstituted		
6756	Succinic acid, <u>N</u> -( <i>tert</i> -butylcarbamoyl)-2(or 3)-sulfo-, sodium salt, isopropyl ester	43
6755	-----, methyl ester	66
6754	-----, <u>N</u> -carbamoyl-2(or 3)-sulfo-, sodium salt, dodecyl ester	-16
6753	-----, methyl ester	-27
5891	Urea, 3,3-bis(2-hydroxyethyl)-1-( <i>m</i> -chlorophenyl)-	44
5918	-----, 1,1-bis(2-hydroxyethyl)-3-( <i>m</i> -chlorophenyl)-, bis( <i>m</i> -chlorocarbanilate)	36
2994	-----, 1,3-bis(2,2,2-trichloro-1-hydroxyethyl)-	37
2993	-----, 1-(2,2,2-trichloro-1-hydroxyethyl)-	36
5890	-----, 3-(2,2,2-trichloro-1-hydroxyethyl)-1- <i>m</i> -tolyl-	62
ZINC COMPOUNDS		
4054	2-Benzimidazolethiol, zinc derivative	92
3921, 7286	2-Benzothiazolethiol, zinc derivative	-35, 0
3906	Carbamic acid, <u>N</u> -(2-cyanoethyl)- <u>N</u> -ethyldithio-, zinc salt	74
7287	-----, dibenzylidithio-, zinc salt	47
7288	-----, dimethyldithio-, zinc salt	83
3057	-----, ethylenebis[ <u>N</u> -(2-cyanoethyl)dithio-, zinc salt	70
3221	-----, <i>N,N'</i> -ethylenebis[ <u>N</u> -butyldithio-, zinc salt	22
5949	-----, (3,5,5-trimethylhexyl)dithio-, zinc salt	91
2761	Nicotine, compound with 2 f. wt. zinc oxalate and 1 f. wt. oxalic acid, pentahydrate	94
2769	compound with $\frac{1}{2}$ f. wt. zinc salicylate and 1 f. wt. salicylic acid, monohydrate	79
2774	compound with $\frac{1}{2}$ f. wt. zinc thiocyanate	96
2773	compound with 1 f. wt. zinc thiocyanate and 1 f. wt. thiocyanic acid	89
3500	Phenol, pentachloro-, zinc derivative	91
3907	Phthalic acid, zinc salt	35
6511	6H-1,3-Thiazine-2-thiol, 4,6,6-trimethyl-, zinc derivative	97
6466	Xanthic acid, <u>sec</u> -butyl-, zinc salt	33
6390	-----, cyclohexyl-, zinc salt	56
6241	-----, ethyl-, zinc salt	-17
6243	-----, isopropyl-, zinc salt	-6

TABLE I

Code No.	Classification and Name	K Value
MISCELLANEOUS, UNIDENTIFIED AND UNKNOWN STRUCTURES		
4210	Alkazene 42	39
7007*	2-Alkenyl-1-(2-hydroxyethyl)-2-imidazoline, hydrogenated	99
4518	Alkylamine, bentonite-18	35
4519	-----, bentonite-34	44
6021	Amicetin	41
7230	Amine D, disalt with fatty acids	74
4691	Animal Repellent BA-1	18
5210-S	Animal Repellent (skunk oil preparation)	88
6778	Animal Repellent 138	47
3861	Aureothricin, dried broth	90
4473	Benzaldehyde, 2,4-bis(dichloropolyyvinyl)- 1(and 3)-Benzyl-2-[ $\alpha$ -heptadecenyl] and ( $\alpha$ , $\omega$ -heptadeca- dienyl]-1-(2-hydroxyethyl)-2-imidazolium chloride, mixture, 60 percent in isopropyl alcohol	28
6999	Bis(2-hydroxyethyl)dodecylamine, addition compound with boron trifluoride, bentonite	94
4514	Bis(2-hydroxyethyl)tetradecylamine, addition compound with boron trifluoride, bentonite	51
4515	N-Butylmaleimide, polymer	13
6679	Carbamic acid, dithio-, N-[2-(disubstitutedamino)- ethyl]-, mixture	29
6813	CME 4765-109	95
4301	CP3438-(3)	(T)
3541	Cunimene #2243	97
3540	-----, #2246	80
6800	Cyanoethylated cyclicpolyamines, mixed	92
6804	Cyclicpolyamines, mixed	42
3539	De-Sol	35
4806	Dibutylamine, sulfate, cellulose	-29
7283	Dihydrazine sulfate, blend	54
3642	2,2"-Dithiobisbenzothiazole, reaction product with sulfur	81
5137	2,2"-Dithiobisbenzothiazole, reaction product with sulfur	-22
6833	DV-2567	100
3125	Furfurin	96
7004*	G-8	86
2931, 2932	2-[( $\alpha$ -heptadecenyl) and ( $\alpha$ , $\omega$ -heptadecadienyl)]-1- (2-hydroxyethyl)-2-imidazoline, mixture	93
2930	Hexachlorocyclopentadiene derivative	20, -44
5566	Hexachloropentadiene derivative	64
5565	Imidazoline, complex with cottonseed acids	52
5567	complex with tall oil acids	77
7107*	complex with tallow acids	72
	Imitation Honey	37

TABLE I

Code No.	Classification and Name	K Value
MISCELLANEOUS, UNIDENTIFIED AND UNKNOWN STRUCTURES		
6683	Isopropyl fumarate, polymer with <u>N</u> -isopropylmaleimide	46
5197	Isosafrole, octyl sulfoxide of	81
4516	Laurylamine, addition compound with boron trifluoride, bentonite	
4517	addition compound with boron trifluoride(?), bentonite	50
4511	Laurylammonium----(?), bentonite	49
6517	Lignin, arsenic derivative	11
6518	-----, chlorinated	50
6514	-----, copper salt	20
6516	-----, lead salt	4
6515	-----, mercury salt	54
6519	-----, phosphate	7
6520	-----, thiophosphate	30
7008	LJS-106	26
6777	<u>Mentha rotundifolia</u>	96
3640	2-Mercaptobenzothiazole, polymer with ethylene oxide(1:10), (Hibitite L)	95
6678	Methyl methacrylate, polymer with <u>N</u> -phenylmaleimide	63
3126	MGK 264	45
4512	Myristylamine, addition compound with boron trifluoride, bentonite	56
4513	Myristylammonium----(?), bentonite	22
4698	Naphthenylamine B, disalt with G-4	42
4697	monosalt with G-4	98
4699	monosalt with G-11	99
4700	salt with pentachlorophenol	100
7298	Naugawhite (hindered phenol)	98
4051	Netropsin, disulfate	17
3846	Phosphoramido polymer hydrolyzed	43
3852	Pigments	69
6931	Alkali blue P, CP258 AB8219	32
6930	Alkali blue R, CP812 AB8224	-24
6932	Alkali blue RRS, CP636 AB8225	-4
6926	Alizarin maroon, RX10352 S-958	24
6927	Alizarin red, RX10132 S-954	2
6866	Arcturus red, CP1270 AB8147	25
6867	Arcturus red, CPL275 AB8148	29
6888	Benzidine orange, 12193 S-924	1
6899	Benzidine yellow anilide, 12190 S-906	9
6901	Benzidine yellow lemon, 12221 S-910	45
6896	Benzidine yellow lightfast, 12220 S-909	5
6903	Benzidine yellow medium, 12222 S-911	52
6902	Benzidine yellow medium, RX12223 S-968	-10
		28

TABLE I

Code No.	Classification and Name	K Value
MISCELLANEOUS, UNIDENTIFIED AND UNKNOWN STRUCTURES		
Pigments		
6900	Benzidine yellow primrose, 12226 S-905	37
6897	Benzidine yellow toluidine, 12192 S-908	31
6898	Benzidine yellow trans. 12191 S-907	48
6874	Brilliant toning red, CP1200 AB8138	-16
6873	Brilliant toning red, CP1205 AB8137	-53
6871	Britone red M, CP873 AB8156	-5
6872	Britone red M, CP2102 AB8157	-112
6868	Britone red R, CP565 AB8142	-34
6869	Britone red R, CP2200 AB8143	-41
6870	Britone red Y, CP423 AB8151	-95
6840	Chrome green deep, RX11835 S-964	-79
6921	Chrome green light, RX11231 S-961	18
6920	Chrome green light, RX11825 S-960	-18
6919	Chrome green medium, RX11233 S-962	42
6848	Chrome green medium deep, RX11234 S-963	46
6850	Chrome orange deep, 12084 S-930	30
6849	Chrome orange extra deep, 12093 S-931	40
6914	Chrome orange light, 12311 S-912	52
6913	Chrome orange medium, 12082 S-913	-40
6904	Chrome yellow for green, 12160 S-925	-118
6907	Chrome yellow light, 12121 S-915	-7
6906	Chrome yellow light medium, 12163 S-926	-59
6910	Chrome yellow lightfast light, 12162 S-918	-60
6908	Chrome yellow lightfast primrose, 12161 S-917	-22
6905	Chrome yellow medium, 12096 S-916	-99
6909	Chrome yellow, primrose, 12074 S-914	-5
6876	Dearborn red deep, 10453 S-940	-16
6877	Dearborn red extra deep, 10467 S-941	51
6875	Dearborn red light, 10452 S-936	-39
6858	Dianisidine orange, 10406 S-929	8
6942	Fuchsines, CP204 AB8229	93
6943	Fuchsines special base, CP222 AB8228	78
6941	Graphic maroon, CP820 AB8200	-32
6892	Graphic red M, CP233 AB8153	10
6894	Graphic red M, CP802 AB8155	12
6893	Graphic red M, CP21000 AB8154	29
6895	Graphic red R, CP234 AB8158	15
6891	Graphic red Y, CP272 AB8150	-5
6863	Illini red, CP1264 AB8152	43
6878	Lake red C, CP845 AB8145	-41
6879	Lake red C, CP2301 AB8146	-65
6940	Microtex britone maroon, CP2203 AB8221	44
6884	Microtex rubanox red, CP2401 AB8132	-293

TABLE I

Code No.	Classification and Name	K Value
MISCELLANEOUS, UNIDENTIFIED AND UNKNOWN STRUCTURES		
	Pigments	
6844	Molybdate orange, RX12095 S-932	5
6847	Molybdate orange deep, 12145 S-933	13
6846	Molybdate orange deep, 12155 S-920	-10
6845	Molybdate orange light, 12153 S-919	18
6929	Naphthol red-ITR type, RX10459 S-953	52
6857	Naphthol red deep, RX10460 S-951	-66
6853	Naphthol red light, RX10454 S-949	39
6928	Naphthol red light, RX10468 S-952	37
6854	Naphthol red medium, RX10455 S-950	49
6881	Parared deep, 10109 S-936	29
6880	Parared light, 10333 S-935	-45
6882	Permachlor red, 10382 S-938	-17
6939	Permachrom maroon, CP779 AB8222	28
6852	Permachrom red, CP1083 AB8139	46
6851	Permachrom red, CP1086 AB8140	58
6859	Permanent orange, 1333 S-922	49
6937	Permansa green, CP1236 AB8217	39
6938	Permansa green variant, CP1258 AB8218	-24
6861	Permansa orange, 1047 S-923	-73
6860	Permansa orange, 1036? S-921	-16
6862	Permansa red, 10361 S-937	-113
6912	Permansa yellow 10G, 12105 S-928	-150
6936	Permatoning violet, CP490 AB8230	21
6855	Plasticone red deep, RX10457 S-948	10
6883	Plasticone red, light, 10465 S-934	-202
6856	Plasticone red M. RX10464 S-947	-11
6890	Polaris red, CP1285 AB8136	26
6922	Pyrolux maroon, RX10411 S-959	-43
6935	Royal methyl violet, CP639 AB8231	-41
6933	Royal victoria blue, CP637 AB8227	97
6885	Rubanox red, CP368 AB8133	30
6886	Rubanox red, CP543 AB8141	-94
6842	Serene green, RX11206 S-967	8
6843	Shamrock green deep, RX11185 S-966	15
6841	Shamrock green light, RX11184 S-965	-51
6944	Solfast blue, 23100 AB8238	8
6838	Solfast blue M, 33100	-92
6839	Solfast green, 53100	-49
6865	Solfast red, CP760 AB8135	40
6864	Solfast red, CP967 AB8134	40
6934	Solfast victoria blue, CP476 AB8226	96
6887	Superior red, CP142 AB8144	-55

TABLE I

Code No.	Classification and Name	K Value
MISCELLANEOUS, UNIDENTIFIED AND UNKNOWN STRUCTURES		
	Pigments	
6924	Toluidine maroon deep, RX10393 S-956	-31
6925	Toluidine maroon deep, RX10458 S-957	-8
6923	Toluidine maroon light, RX10396 S-955	47
6915	Toluidine red, 10189 S-943	-26
6889	Toluidine red, 10298 S-942	16
6917	Toluidine red deep, 10395 S-945	-42
6916	Toluidine red extra deep, 10463 S-946	-32
6918	Toluidine red medium, 10461 S-944	2
6911	Zinc yellow, 12054 S-927	85
4106	1-Pimamic acid, addition product with maleic anhydride	96
6798	Polyethyleneimine	-9
4029	Quebracho, chlorinated(10.6 percent)	-29
2972	Quilon	65
5718	RA-63	34
3985	Rimocidin, sulfate, hydrate	73
3329	Rosinamine D, salt with zinc dimethyldithiocarbamate	96
2824	Starch, hexamethylenedicarbamate	-37
6684	Styrene, polymer with N-butylmaleimide	43
6680	polymer with N-phenylmaleimide (2:1)	45
3834	reaction product with sulfur	22
4123	p-Styrenesulfonic acid, sodium salt, polymer	-31
2732	Thanite	91
6498	Thiodan	(T)
7010	Thioneb	(T)
4535	Thiourea, complex with tallow acids	99
6949	Tributyltin, complex with resin acids	78
6781*	complex with tall oil acids	98
3728	Trinitrotoluene, condensation product with N,N-dimethyl-p-nitrosoaniline	-24
3178	Triton X-100	67
6499	V-C 3-103	94
6682	Vinyl chloride, polymer with N-butylmaleimide	68
6681	polymer with N-isopropylmaleimide	7
6685	x-Vinylpyridine, polymer with N-isopropylmaleimide	59
2973	Volan	40

TABLE II

## ACTIVITY OF SUBSTITUTED OR UNSUBSTITUTED FUNCTIONAL GROUPS

<u>Functional Group</u>	<u>Substituent</u>	No. <u>Tested</u>	$\bar{X}$	CV	No. K's <u>&gt;84</u>	Repel- lency <u>Index</u>
ACID ANHYDRIDES	UNSUB	7	36	109	1	.03
ACID ANHYDRIDES	SUB	12	37	113	1	.03
ACID HALIDES	SUB	1	87	0	1	99.99
ACIDS, CARBOXYLIC	UNSUB MONOBASIC	27	38	99	2	.06
ACIDS, CARBOXYLIC	UNSUB POLYBASIC	22	42	99	1	.04
ACIDS, CARBOXYLIC	MONOSUB ALCOHOLS	8	55	59	3	.23
ACIDS, CARBOXYLIC	MONOSUB AMIDES	16	58	30	1	.16
ACIDS, CARBOXYLIC	MONOSUB AMINES	8	26	250	1	.01
ACIDS, CARBOXYLIC	MONOSUB ESTERS	3	84	16	1	.44
ACIDS, CARBOXYLIC	MONOSUB ETHERS	10	52	73	2	.12
ACIDS, CARBOXYLIC	MONOSUB HALIDES	17	41	86	2	.08
ACIDS, CARBOXYLIC	MONOSUB HETERO CYCLIC COMPOUNDS	14	33	122	0	.00
ACIDS, CARBOXYLIC	MONOSUB IMIDES	3	36	154	0	.00
ACIDS, CARBOXYLIC	MONOSUB IODONIUM COMPOUNDS	2	32	125	0	.00
ACIDS, CARBOXYLIC	MONOSUB KETONES	10	38	50	0	.00
ACIDS, CARBOXYLIC	MONOSUB LACTAMS	3	33	99	0	.00
ACIDS, CARBOXYLIC	MONOSUB NITRO COMPOUNDS	4	38	87	0	.00
ACIDS, CARBOXYLIC	MONOSUB PHENOLS	11	56	47	2	.20
ACIDS, CARBOXYLIC	MONOSUB THIOCARBAMATES	2	82	1	0	.00
ACIDS, CARBOXYLIC	MONOSUB THIOUREAS	6	29	162	0	.00
ACIDS, CARBOXYLIC	MONOSUB UREAS	2	43	23	0	.00
ACIDS, CARBOXYLIC	MONOSUB MISCELLANEOUS	8	56	72	3	.19
ACIDS, CARBOXYLIC	DISUB AMIDE-HALIDES	3	85	5	2	2.83
ACIDS, CARBOXYLIC	DISUB AMIDE-HETERO CYCLIC COMPOUNDS	2	71	17	0	.00
ACIDS, CARBOXYLIC	DISUB AMIDE-NITRO COMPOUNDS	3	64	35	1	.15
ACIDS, CARBOXYLIC	DISUB ETHER-HALIDES	5	67	46	3	.36
ACIDS, CARBOXYLIC	DISUB HALIDE-HETERO CYCLIC COMPOUNDS	6	80	26	4	1.03
ACIDS, CARBOXYLIC	DISUB HALIDE-PHENOLS	4	95	4	4	7.92
ACIDS, CARBOXYLIC	DISUB HETERO CYCLIC-KETONES	2	48	54	0	.00
ACIDS, CARBOXYLIC	DISUB MISCELLANEOUS	25	47	53	1	.07
ACIDS, CARBOXYLIC	POLYSUB	3	61	45	2	.23
ALCOHOLS	UNSUB	36	56	45	2	.21
ALCOHOLS	MONOSUB ACIDS	8	55	59	3	.23
ALCOHOLS	MONOSUB AMIDES	18	53	69	4	.26
ALCOHOLS	MONOSUB AMINES	36	74	30	17	3.49
ALCOHOLS	MONOSUB CARBAMATES	13	31	120	0	.00
ALCOHOLS	MONOSUB ESTERS	3	58	39	1	.12
ALCOHOLS	MONOSUB ETHERS	8	49	79	0	.00
ALCOHOLS	MONOSUB HALIDES	14	59	41	3	.36
ALCOHOLS	MONOSUB HETERO CYCLIC COMPOUNDS	12	73	27	6	1.35
ALCOHOLS	MONOSUB IMIDES	5	74	22	1	.28
ALCOHOLS	MONOSUB KETONES	5	49	76	0	.00
ALCOHOLS	MONOSUB PHENOLS	2	86	8	1	.90
ALCOHOLS	MONOSUB QUATERNARY NITROGEN COMPOUNDS	9	71	48	5	.62

TABLE II

<u>Functional Group</u>	<u>Substituent</u>	No. Tested	K CV	No. K's >84	Repel- lency Index
ALCOHOLS	MONOSUB SULFONIC ACIDS	2	9	323	0 .00
ALCOHOLS	MONOSUB THIOCARBAMATES	2	37	143	1 .02
ALCOHOLS	MONOSUB THIOUREAS	3	79	4	0 .00
ALCOHOLS	MONOSUB UREAS	2	10	470	0 .00
ALCOHOLS	MONOSUB MISCELLANEOUS	6	55	87	2 .11
ALCOHOLS	DISUB AMIDE-HALIDES	3	86	13	2 1.10
ALCOHOLS	DISUB AMINE-ETHERS	4	92	4	4 7.67
ALCOHOLS	DISUB AMINE-HALIDES	13	81	18	5 1.87
ALCOHOLS	DISUB AMINE-PHENOLS	7	79	32	4 .82
ALCOHOLS	DISUB CARBAMATE-HALIDES	2	89	57	1 .13
ALCOHOLS	DISUB ETHER-HALIDES	3	74	18	1 .34
ALCOHOLS	DISUB ETHER-QUATERNARY NITROGENS	2	10	870	1 <0.01
ALCOHOLS	DISUB HALIDE-HETEROCYCLIC COMPOUNDS	3	95	2	3 11.82
ALCOHOLS	DISUB HALIDE-NITRO COMPOUNDS	4	73	42	3 .43
ALCOHOLS	DISUB HALIDE-PHENOLS	3	77	12	1 .53
ALCOHOLS	DISUB HALIDE-PHOSPHORUS COMPOUNDS	2	86	0	2 99.99
ALCOHOLS	DISUB HALIDE-QUAT. NITROGEN COMPOUNDS	5	96	4	5 10.00
ALCOHOLS	DISUB HALIDE-UREAS	4	45	23	0 .00
ALCOHOLS	DISUB HETEROCYCLIC-KETONES	2	9	55	0 .00
ALCOHOLS	DISUB MISCELLANEOUS	30	61	54	9 .85
ALCOHOLS	POLYSUB	26	71	39	10 1.52
ALDEHYDES	UNSUB	6	69	31	2 .37
ALDEHYDES	MONOSUB ETHERS	3	30	77	0 .00
ALDEHYDES	MONOSUB NITRO COMPOUNDS	2	63	18	0 .00
ALDEHYDES	MONOSUB MISCELLANEOUS	3	53	32	0 .00
ALDEHYDES	POLYSUB	8	78	26	4 1.00
AMIDES	UNSUB MONOBASIC ACIDS	150	69	50	67 7.70
AMIDES	UNSUB POLYBASIC ACIDS	21	18	244	0 .00
AMIDES	MONOSUB ACIDS	16	58	30	1 .16
AMIDES	MONOSUB ALCOHOLS	18	53	69	4 .26
AMIDES	MONOSUB AMINES	7	85	14	5 2.53
AMIDES	MONOSUB AZO COMPOUNDS	2	71	1	0 .00
AMIDES	MONOSUB ESTERS	15	46	49	1 .08
AMIDES	MONOSUB ETHERS	58	62	41	9 1.13
AMIDES	MONOSUB HALIDES	90	64	41	29 3.77
AMIDES	MONOSUB HETEROCYCLIC COMPOUNDS	28	75	34	15 2.76
AMIDES	MONOSUB HYDRAZIDES	3	96	3	3 8.00
AMIDES	MONOSUB IMIDES	5	66	26	2 .42
AMIDES	MONOSUB IMINES	2	52	22	2 .39
AMIDES	MONOSUB IODONIUM.COMPOUNDS	1	20	0	0 99.99
AMIDES	MONOSUB KETONES	17	35	199	4 .06
AMIDES	MONOSUB NITRILES	6	56	54	2 .17
AMIDES	MONOSUB NITRO COMPOUNDS	36	71	45	21 2.76
AMIDES	MONOSUB PHENOLS	13	52	60	3 .22
AMIDES	MONOSUB THIOUREAS	3	65	35	1 .15
AMIDES	MONOSUB MISCELLANEOUS	14	55	53	2 .17
AMIDES	DISUB ACID-HALIDES	3	85	5	2 2.83

TABLE II

<u>Functional Group</u>	<u>Substituent</u>	No.	K	CV	No. K's >84	Repel-lency Index
AMIDES	DISUB ACID-HETEROCYCLIC COMPOUNDS	2	71	17	0	.00
AMIDES	DISUB ACID-NITRO COMPOUNDS	3	64	35	1	.15
AMIDES	DISUB ALCOHOL-HALIDES	3	86	13	2	1.10
AMIDES	DISUB AMINE-ETHERS	2	86	13	1	.55
AMIDES	DISUB AMINE-HALIDES	2	81	18	1	.37
AMIDES	DISUB AMINE-HETEROCYCLIC COMPOUNDS	3	26	86	0	.00
AMIDES	DISUB AZO-HALIDES	2	21	21	0	.00
AMIDES	DISUB ESTER-HALIDES	2	54	35	0	.00
AMIDES	DISUB ESTER-NITRILES	2	22	163	0	.00
AMIDES	DISUB ETHER-HALIDES	22	23	254	1	.01
AMIDES	DISUB ETHER-NITRO COMPOUNDS	4	72	27	2	.44
AMIDES	DISUB ETHER-PHENOLS	2	26	3	0	.00
AMIDES	DISUB HALIDE-KETONES	2	68	5	0	.00
AMIDES	DISUB HALIDE-NITRO COMPOUNDS	10	53	33	1	.13
AMIDES	DISUB HALIDE-PHENOLS	27	86	20	20	7.17
AMIDES	DISUB HETEROCYCLIC-NITRO COMPOUNDS	3	96	1	3	24.00
AMIDES	DISUB MISCELLANEOUS	31	44	92	6	.24
AMIDES	POLYSUB	9	76	33	4	.77
AMIDINES	SUB	5	80	11	2	1.21
AMINE OXIDES	UNSUB	1	42	0	0	99.99
AMINES	UNSUB PRIMARY	62	84	23	43	13.09
AMINES	UNSUB SECONDARY	32	82	23	21	6.24
AMINES	UNSUB TERTIARY	34	76	37	21	3.59
AMINES	UNSUB MIXED	7	87	8	5	4.53
AMINES	MONOSUB ACIDS	8	26	250	1	.01
AMINES	MONOSUB ALCOHOLS	36	74	30	17	3.49
AMINES	MONOSUB AMIDES	7	85	14	5	2.53
AMINES	MONOSUB AZO COMPOUNDS	2	20	366	1	<0.01
AMINES	MONOSUB CARBAMATES	3	76	18	1	.35
AMINES	MONOSUB ESTERS	5	63	20	0	.00
AMINES	MONOSUB ETHERS	17	76	33	7	1.34
AMINES	MONOSUB HALIDES	14	83	23	7	2.11
AMINES	MONOSUB HETEROCYCLIC COMPOUNDS	59	73	40	29	4.41
AMINES	MONOSUB HYDRAZINES AND DERIVATIVES	2	53	20	0	.00
AMINES	MONOSUB HYDROXYLAMINES	3	42	129	1	.03
AMINES	MONOSUB IMIDES	9	46	63	1	.06
AMINES	MONOSUB IMINES	2	76	29	1	.22
AMINES	MONOSUB KETONES	12	72	28	4	.86
AMINES	MONOSUB LACTAMS	2	67	13	0	.00
AMINES	MONOSUB LACTONES	2-120	-99	0	0	.00
AMINES	MONOSUB NITRILES	17	72	40	9	1.35
AMINES	MONOSUB NITRO COMPOUNDS	10	71	30	4	.79
AMINES	MONOSUB NITROSO COMPOUNDS	2	91	8	1	.95
AMINES	MONOSUB PHENOLS	16	77	34	8	1.51
AMINES	MONOSUB SULFONES	3	34	117	0	.00
AMINES	MONOSUB SULFONIC ACIDS	6	14	511	0	.00
AMINES	MONOSUB THIOCARBAMATES	3	78	22	1	.30

TABLE II

<u>Functional Group</u>	<u>Substituent</u>	<u>No.</u> <u>Tested</u>	<u>K</u>	<u>CV</u>	<u>No.</u> <u>K's</u> <u>&gt;84</u>	<u>Repel-</u> <u>lency</u> <u>Index</u>
AMINES	MONOSUB THIOUREAS	3	93	4	3	5.81
AMINES	MONOSUB UREAS	5	46	70	1	.05
AMINES	MONOSUB MISCELLANEOUS	5	16	491	1	0.01
AMINES	DISUB ALCOHOL-ETHERS	4	92	4	4	7.67
AMINES	DISUB ALCOHOL-HALIDES	13	81	18	5	1.87
AMINES	DISUB ALCOHOL-PHENOLS	7	79	32	4	.82
AMINES	DISUB AMIDE-ETHERS	2	86	13	1	.55
AMINES	DISUB AMIDE-HALIDES	2	81	18	1	.37
AMINES	DISUB AMIDE-HETEROCYCLIC COMPOUNDS	3	26	86	0	.00
AMINES	DISUB ETHER-HALIDES	2	96	0	2	99.99
AMINES	DISUB ETHER-HETEROCYCLIC COMPOUNDS	11	63	11	9	6.07
AMINES	DISUB ETHER-IMIDES	2	32	121	0	.00
AMINES	DISUB ETHER-NITRILES	3	92	7	2	2.19
AMINES	DISUB ETHER-NITRO COMPOUNDS	4	78	6	0	.00
AMINES	DISUB HALIDE-HETEROCYCLIC COMPOUNDS	9	75	39	4	.64
AMINES	DISUB HALIDE-IMIDES	3	39	6	9	.00
AMINES	DISUB HALIDE-KETONES	4	62	32	1	.16
AMINES	DISUB HALIDE-NITRILES	2	77	7	0	.00
AMINES	DISUB HALIDE-NITRO COMPOUNDS	3	78	16	2	.81
AMINES	DISUB HALIDE-QUAT. NITROGEN COMPOUNDS	3	95	5	3	4.75
AMINES	DISUB HALIDE-SULFONES	2	76	6	0	.00
AMINES	DISUB HETEROCYCLIC-KETONES	3	55	20	0	.00
AMINES	DISUB HETEROCYCLIC-NITRILES	5	35	93	1	.03
AMINES	DISUB KETONE-PHENOLS	2	50	26	0	.00
AMINES	DISUB NITRILE-PHENOLS	2	66	12	0	.00
AMINES	DISUB MISCELLANEOUS	37	60	53	11	1.04
AMINES	POLYSUB	38	68	53	17	1.82
ANTIMONY COMPOUNDS	MIXED	3	18	160	0	.00
ARSENIC COMPOUNDS	MIXED	13	77	44	6	.88
AZO AND AZOXY COMPOUNDS	MIXED	10	54	87	4	.21
BISMUTH COMPOUNDS	MIXED	3	35	161	0	.00
BORON COMPOUNDS	MIXED	36	71	45	18	2.37
CARBAMATES	UNSUB	64	72	29	18	3.72
CARBAMATES	MONOSUB ALCOHOLS	13	31	120	0	.00
CARBAMATES	MONOSUB AMINES	3	76	18	1	.35
CARBAMATES	MONOSUB ESTERS	5	61	16	0	.00
CARBAMATES	MONOSUB ETHERS	6	62	18	0	.00
CARBAMATES	MONOSUB HALIDES	51	69	35	17	2.79
CARBAMATES	MONOSUB HETEROCYCLIC COMPOUNDS	18	78	13	7	3.50
CARBAMATES	MONOSUB NITRILES	4	71	12	1	.49
CARBAMATES	MONOSUB NITRO COMPOUNDS	7	77	23	4	1.12
CARBAMATES	MULTI SUB MISCELLANEOUS	3	69	11	0	.00
CARBAMATES	DISUB ALCOHOL-HALIDES	2	89	57	1	.13
CARBAMATES	DISUB ESTER-HALIDES	4	82	7	1	.98
CARBAMATES	DISUB ETHER-HALIDES	5	79	12	1	.55
CARBAMATES	DISUB HALIDE-NITRILES	2	68	22	0	.00
CARBAMATES	DISUB PHENOL-QUINONES	2	-42	-10	0	.00

TABLE II

<u>Functional Group</u>	<u>Substituent</u>	No. Tested	<u>K</u>	<u>CV</u>	No. K's >84	Repel- lency Index
CARBAMATES	DISUB MISCELLANEOUS	6	71	25	2	.47
CARBAMATES	POLYSUB	3	62	17	0	.00
CARBOHYDRAZIDES	MIXED	2	77	29	1	.22
CARBONATES	MIXED	15	52	77	3	.17
COPPER COMPOUNDS	MIXED	29	69	61	14	1.32
ESTERS, CARBOXYLIC ACIDS	UNSUB MONOBASIC ACIDS	11	21	190	0	.00
ESTERS, CARBOXYLIC ACIDS	UNSUB POLYBASIC ACIDS	17	69	60	11	1.05
ESTERS, CARBOXYLIC ACIDS	MONOSUB ACIDS	3	84	16	1	.44
ESTERS, CARBOXYLIC ACIDS	MONOSUB ALCOHOLS	3	58	39	1	.12
ESTERS, CARBOXYLIC ACIDS	MONOSUB AMIDES	15	46	49	1	.08
ESTERS, CARBOXYLIC ACIDS	MONOSUB AMINES	5	63	20	9	.00
ESTERS, CARBOXYLIC ACIDS	MONOSUB CARBAMATES	5	61	16	0	.00
ESTERS, CARBOXYLIC ACIDS	MONOSUB ETHERS	6	26	169	0	.00
ESTERS, CARBOXYLIC ACIDS	MONOSUB HALIDES	12	67	81	6	.41
ESTERS, CARBOXYLIC ACIDS	MONOSUB HETEROCYCLIC COMPOUNDS	39	58	41	4	.47
ESTERS, CARBOXYLIC ACIDS	MONOSUB HYDRAZINES AND DERIVATIVES	4	89	13	3	1.71
ESTERS, CARBOXYLIC ACIDS	MONOSUB IMIDES	6	34	218	2	.03
ESTERS, CARBOXYLIC ACIDS	MONOSUB KETONES	8	27	160	1	.01
ESTERS, CARBOXYLIC ACIDS	MONOSUB LACTAMS	2	34	61	0	.00
ESTERS, CARBOXYLIC ACIDS	MONOSUB LACTONES	5	39	93	1	.03
ESTERS, CARBOXYLIC ACIDS	MONOSUB NITRILES	12	65	50	4	.43
ESTERS, CARBOXYLIC ACIDS	MONOSUB NITRO COMPOUNDS	5	65	36	2	.30
ESTERS, CARBOXYLIC ACIDS	MONOSUB QUAT. NITROGEN COMPOUNDS	3	80	23	2	.58
ESTERS, CARBOXYLIC ACIDS	MONOSUB SULFIDES	3	62	7	0	.00
ESTERS, CARBOXYLIC ACIDS	MONOSUB SULFONES	2	20	210	0	.00
ESTERS, CARBOXYLIC ACIDS	MONOSUB THIOCARBAMATES	4	83	12	2	1.15
ESTERS, CARBOXYLIC ACIDS	MONOSUB THIOCYANATES	6	82	13	2	1.05
ESTERS, CARBOXYLIC ACIDS	MONOSUB THIOUREAS	3	59	50	1	.10
ESTERS, CARBOXYLIC ACIDS	MONOSUB UREAS	5	70	36	1	.16
ESTERS, CARBOXYLIC ACIDS	MONOSUB MISCELLANEOUS	4	70	49	2	.24
ESTERS, CARBOXYLIC ACIDS	DISUB AMIDE-HALIDES	2	54	35	0	.00
ESTERS, CARBOXYLIC ACIDS	DISUB AMIDE-NITRILES	2	22	168	0	.00
ESTERS, CARBOXYLIC ACIDS	DISUB CARBAMATE-HALIDES	4	82	7	1	.98
ESTERS, CARBOXYLIC ACIDS	DISUB ETHER-HALIDES	8	60	38	0	.00
ESTERS, CARBOXYLIC ACIDS	DISUB ETHER-LACTONES	2	31	34	0	.00
ESTERS, CARBOXYLIC ACIDS	DISUB ETHER-PHENOLS	2	30	1	0	.00
ESTERS, CARBOXYLIC ACIDS	DISUB HALIDE-HETEROCYCLIC COMPOUNDS	14	80	52	11	1.41
ESTERS, CARBOXYLIC ACIDS	DISUB HALIDE-HYDRAZINES	3	67	25	1	.22
ESTERS, CARBOXYLIC ACIDS	DISUB HALIDE-KETONES	2	53	11	0	.00
ESTERS, CARBOXYLIC ACIDS	DISUB HALIDE-NITRO COMPOUNDS	3	43	73	1	.05
ESTERS, CARBOXYLIC ACIDS	DISUB HALIDE-SULFIDES	2	85	5	1	1.42
ESTERS, CARBOXYLIC ACIDS	DISUB HALIDE-THIOCARBAMATES	3	85	13	1	.54
ESTERS, CARBOXYLIC ACIDS	DISUB HETEROCYCLIC-NITRO COMPOUNDS	12	86	13	9	4.96
ESTERS, CARBOXYLIC ACIDS	DISUB SULFONIC ACID-UREAS	5	24	157	0	.00
ESTERS, CARBOXYLIC ACIDS	DISUB MISCELLANEOUS	27	58	38	5	.64
ESTERS, CARBOXYLIC ACIDS	POLYSUB	14	62	40	3	.39
ETHERS	UNSUB	11	44	79	2	.09

TABLE II

<u>Functional Group</u>	<u>Substituent</u>	No. Tested	$\bar{K}$	CV	No. K's >84	Repel- lency Index
ETHERS	MONOSUB ACID ANHYDRIDES	2	-44	-18	0	.00
ETHERS	MONOSUB ACIDS	10	52	73	2	.12
ETHERS	MONOSUB ALCOHOLS	8	49	79	0	.00
ETHERS	MONOSUB ALDEHYDES	3	30	77	0	.00
ETHERS	MONOSUB AMIDES	58	62	41	9	1.13
ETHERS	MONOSUB AMINES	17	76	33	7	1.34
ETHERS	MONOSUB CARBAMATES	6	62	18	0	.00
ETHERS	MONOSUB ESTERS	6	26	169	0	.00
ETHERS	MONOSUB HALIDES	16	67	27	4	.83
ETHERS	MONOSUB HETEROCYCLIC COMPOUNDS	16	70	29	4	.80
ETHERS	MONOSUB HYDRAZIDES	2	24	270	1	.01
ETHERS	MONOSUB IMIDES	6	-15	-199	0	.00
ETHERS	MONOSUB KETONES	8	54	52	1	.09
ETHERS	MONOSUB LACTONES	4	28	68	0	.00
ETHERS	MONOSUB NITRILES	6	83	12	3	1.73
ETHERS	MONOSUB NITRO COMPOUNDS	18	72	26	6	1.38
ETHERS	MONOSUB QUAT. NITROGEN COMPOUNDS	4	82	17	2	.80
ETHERS	MONOSUB QUINONES	2	69	24	1	.24
ETHERS	MONOSUB THiocarbamates	3	69	27	1	.21
ETHERS	MONOSUB THiocyanates	6	83	18	4	1.54
ETHERS	MONOSUB THioureas	10	76	35	5	.90
ETHERS	MONOSUB Ureas	4	53	40	0	.00
ETHERS	MONOSUB MISCELLANEOUS	4	83	7	1	.99
ETHERS	DISUB ACID-HALIDES	5	67	46	3	.36
ETHERS	DISUB ALCOHOL-AMINES	4	92	4	4	7.67
ETHERS	DISUB ALCOHOL-HALIDES	3	74	18	1	.34
ETHERS	DISUB ALCOHOL-QUAT. NITROGEN COMPS.	2	10	870	1	<0.01
ETHERS	DISUB AMIDE-AMINES	2	86	13	1	.55
ETHERS	DISUB AMIDE-HALIDES	22	23	254	1	.01
ETHERS	DISUB AMIDE-NITRO COMPOUNDS	4	72	27	2	.44
ETHERS	DISUB AMIDE-PHENOLS	2	26	3	0	.00
ETHERS	DISUB AMINE-HALIDES	2	96	0	2	99.99
ETHERS	DISUB AMINE-HETEROCYCLIC COMPOUNDS	11	89	11	9	6.07
ETHERS	DISUB AMINE-IMIDES	2	32	121	0	.00
ETHERS	DISUB AMINE-NITRILES	3	92	7	2	2.19
ETHERS	DISUB AMINE-NITRO COMPOUNDS	4	78	6	0	.00
ETHERS	DISUB CARBAMATE-HALIDES	5	79	12	1	.55
ETHERS	DISUB ESTER-HALIDES	8	60	38	0	.00
ETHERS	DISUB ESTER-LACTONES	2	31	34	0	.00
ETHERS	DISUB ESTER-PHENOLS	2	30	1	0	.00
ETHERS	DISUB HALIDE-HETEROCYCLIC COMPOUNDS	4	77	21	1	.31
ETHERS	DISUB "IDE-LACTONES	2	74	11	0	.00
ETHERS	DISUB "IDE-NITRILES	2	92	8	1	.96
ETHERS	DISUB HALIDE-NITRO COMPOUNDS	4	42	61	0	.00
ETHERS	DISUB HALIDE-THiocyanates	2	94	6	2	2.61
ETHERS	DISUB HALIDE-Thioureas	2	90	3	2	5.00
ETHERS	DISUB HETEROCYCLIC-HYDRAZINES	2	47	51	0	.00

TABLE II

<u>Functional Group</u>	<u>Substituent</u>	No. Tested	$\bar{K}$	CV	No. K's >84	Repel- lency Index
ETHERS	DISUB HETERO CYCLIC-NITRO COMPOUNDS	5	93	6	4	5.17
ETHERS	DISUB IMINE-PHENOLS	2	48	50	0	.00
ETHERS	DISUB LACTONE-SULFONIC ACID ESTERS	2	19	18	0	.00
ETHERS	DISUB NITRO-PHENOLS	3	88	4	2	3.67
ETHERS	DISUB NITRO-THIOCYANATES	2	88	10	1	.73
ETHERS	DISUB MISCELLANEOUS	25	55	47	4	.39
ETHERS	POLYSUB	32	67	46	11	1.34
GUANIDINES	UNSUB	6	92	8	7	6.71
GUANIDINES	SUB	6	74	30	3	.62
HALIDES	UNSUB BROMIDES	14	46	134	6	.17
HALIDES	UNSUB CHLORIDES	18	49	96	6	.26
HALIDES	UNSUB FLUORIDES	1	80	0	0	99.99
HALIDES	UNSUB IODIDES	3	89	2	3	11.13
HALIDES	UNSUB MIXED	2	84	1	1	7.00
HALIDES	MONOSUB ACID ANHYDRIDES	5	62	23	0	.00
HALIDES	MONOSUB ACIDS	17	41	86	2	.08
HALIDES	MONOSUB ALCOHOLS	14	59	41	3	.36
HALIDES	MONOSUB AMIDES	90	64	41	29	3.77
HALIDES	MONOSUB AMINES	14	83	23	7	2.11
HALIDES	MONOSUB CARBAMATES	51	69	35	17	2.79
HALIDES	MONOSUB ESTERS	12	67	81	6	.41
HALIDES	MONOSUB ETHERS	16	67	27	4	.83
HALIDES	MONOSUB HETERO CYCLIC COMPOUNDS	28	59	79	11	.68
HALIDES	MONOSUB HYDROXYLAMINE DERIVATIVES	4	62	34	0	.00
HALIDES	MONOSUB IMIDES	33	53	99	10	.45
HALIDES	MONOSUB IODONIUM COMPOUNDS	13	87	11	10	6.59
HALIDES	MONOSUB KETONES	14	67	25	2	.45
HALIDES	MONOSUB LACTONES	7	65	40	3	.41
HALIDES	MONOSUB NICOTINE DERIVATIVES	4	85	8	2	1.77
HALIDES	MONOSUB NITRILES	8	68	34	4	.67
HALIDES	MONOSUB NITRO COMPOUNDS	24	77	34	10	1.89
HALIDES	MONOSUB PHENOLS	38	78	25	19	4.94
HALIDES	MONOSUB PHOSPHORUS COMPOUNDS	11	76	38	6	1.00
HALIDES	MONOSUB QUINONES	5	47	64	1	.06
HALIDES	MONOSUB SULFIDES	4	66	59	2	.19
HALIDES	MONOSUB SULFONES	6	80	34	5	.98
HALIDES	MONOSUB SULFONIC ACIDS	5	64	29	0	.00
HALIDES	MONOSUB THiocarbamates	4	94	5	4	6.27
HALIDES	MONOSUB THiocarbonates	2	92	4	2	3.83
HALIDES	MONOSUB THiocyanates	3	96	4	3	6.00
HALIDES	MONOSUB THioureas	19	93	11	17	11.98
HALIDES	MONOSUB Ureas	5	54	90	1	.05
HALIDES	MONOSUB MISCELLANEOUS	8	66	32	3	.52
HALIDES	DISUB ACID-AMIDES	3	85	5	2	2.83
HALIDES	DISUB ACID-ETHERS	5	67	46	3	.36
HALIDES	DISUB ACID-HETERO CYCLIC COMPOUNDS	6	80	26	4	1.03
HALIDES	DISUB ACID-PHENOLS	4	95	4	4	7.92

TABLE II

<u>Functional Group</u>	<u>Substituent</u>	<u>No.</u>	<u>Tested</u>	<u>K</u>	<u>CV</u>	<u>No. K's &gt;84</u>	<u>Repellency Index</u>
HALIDES	DISUB ALCOHOL-AMIDES	3	86	13	2	2	1.10
HALIDES	DISUB ALCOHOL-AMINES	13	81	18	5	5	1.87
HALIDES	DISUB ALCOHOL-CARBAMATES	2	89	57	1	1	.13
HALIDES	DISUB ALCOHOL-ETHERS	3	74	18	1	1	.34
HALIDES	DISUB ALCOHOL-HETEROCYCLIC COMPOUNDS	3	95	2	3	3	11.88
HALIDES	DISUB ALCOHOL-NITRO COMPOUNDS	4	73	42	3	3	.43
HALIDES	DISUB ALCOHOL-PHENOLS	3	77	12	1	1	.53
HALIDES	DISUB ALCOHOL-PHOSPHORUS COMPOUNDS	2	86	0	2	2	99.99
HALIDES	DISUB ALCOHOL-QUAT. NITROGEN COMPS.	5	96	4	5	5	10.00
HALIDES	DISUB ALCOHOL-UREAS	4	45	23	0	0	.00
HALIDES	DISUB AMIDE-AMINES	2	81	18	1	1	.37
HALIDES	DISUB AMIDE-AZO COMPOUNDS	2	21	21	0	0	.00
HALIDES	DISUB AMIDE-ESTERS	2	54	35	0	0	.00
HALIDES	DISUB AMIDE-ETHERS	22	23	254	1	1	.01
HALIDES	DISUB AMIDE-KETONES	2	68	5	0	0	.00
HALIDES	DISUB AMIDE-NITRO COMPOUNDS	10	53	33	1	1	.13
HALIDES	DISUB AMIDE-PHENOLS	27	86	20	20	20	7.17
HALIDES	DISUB AMINE-ETHERS	2	96	0	2	2	99.99
HALIDES	DISUB AMINE-HETEROCYCLIC COMPOUNDS	9	75	39	4	4	.64
HALIDES	DISUB AMINE-IMIDES	3	39	6	0	0	.00
HALIDES	DISUB AMINE-KETONES	4	62	32	1	1	.16
HALIDES	DISUB AMINE-NITRILES	2	77	7	0	0	.00
HALIDES	DISUB AMINE-NITRO COMPOUNDS	3	78	16	2	2	.81
HALIDES	DISUB AMINE-QUAT. NITROGEN COMPS.	3	95	5	3	3	4.75
HALIDES	DISUB AMINE-SULFONES	2	76	6	0	0	.00
HALIDES	DISUB CARBAMATE-ESTERS	4	82	7	1	1	.98
HALIDES	DISUB CARBAMATE-ETHERS	5	79	12	1	1	.55
HALIDES	DISUB CARBAMATE-NITRILES	2	68	22	0	0	.00
HALIDES	DISUB ESTER-ETHERS	8	60	38	0	0	.00
HALIDES	DISUB ESTER-HETEROCYCLIC COMPOUNDS	14	80	52	11	11	1.41
HALIDES	DISUB ESTER-HYDRAZINES	3	67	25	1	1	.22
HALIDES	DISUB ESTER-KETONES	2	53	11	0	0	.00
HALIDES	DISUB ESTER-NITRO COMPOUNDS	3	43	73	1	1	.05
HALIDES	DISUB ESTER-SULFIDES	2	85	5	1	1	1.42
HALIDES	DISUB ESTER-THIACARBAMATES	3	85	13	1	1	.54
HALIDES	DISUB ETHER-HETEROCYCLIC COMPOUNDS	4	77	21	1	1	.31
HALIDES	DISUB ETHER-LACTONES	2	74	11	0	0	.00
HALIDES	DISUB ETHER-NITRILES	2	92	8	1	1	.96
HALIDES	DISUB ETHER-NITRO COMPOUNDS	4	42	61	0	0	.00
HALIDES	DISUB ETHER-THIOCYANATES	2	94	6	2	2	2.61
HALIDES	DISUB ETHER-THIOUREAS	2	90	3	2	2	5.00
HALIDES	DISUB HETEROCYCLIC-HYDROXY DERIVS.	4	55	57	1	1	.08
HALIDES	DISUB HETEROCYCLIC-NITRO COMPOUNDS	6	87	15	2	2	.97
HALIDES	DISUB HETEROCYCLIC-SULFONAMIDES	2	52	43	0	0	.00
HALIDES	DISUB HETEROCYCLIC-THIOUREAS	2	83	7	1	1	.99
HALIDES	DISUB HYDRAZIDE-NITRO COMPOUNDS	2	60	8	0	0	.00
HALIDES	DISUB IMIDE-NITRO COMPOUNDS	4	89	7	3	3	3.18

TABLE II

<u>Functional Group</u>	<u>Substituent</u>	<u>No.</u>	<u>Tested</u>	<u>K</u>	<u>CV</u>	<u>No. K's &gt;84</u>	<u>Repel-lency Index</u>
HALIDES	DISUB IMINE-PHENOLS	2	69	2	0	.00	
HALIDES	DISUB NITRO-PHENOLS	3	92	6	3	3.83	
HALIDES	DISUB PHENOL-SULFIDES	2	86	11	1	.65	
HALIDES	DISUB MISCELLANEOUS	60	61	58	18	1.58	
HALIDES	POLYSUB	52	74	36	22	3.77	
HETEROCYCLIC COMPOUNDS	MIXED NITROGEN	733	65	50	298	26.90	
HETEROCYCLIC COMPOUNDS	MIXED NITROGEN-OXYGEN	88	59	65	20	1.51	
HETEROCYCLIC COMPOUNDS	MIXED NITROGEN-SULFUR	86	59	70	34	2.39	
HETEROCYCLIC COMPOUNDS	MIXED OXYGEN	312	59	67	104	7.63	
HETEROCYCLIC COMPOUNDS	MIXED OXYGEN-SULFUR	7	87	16	4	1.81	
HETEROCYCLIC COMPOUNDS	MIXED SULFUR	33	75	41	21	3.20	
HYDRAZIDES	UNSUB	15	74	38	7	1.14	
HYDRAZIDES	SUB	39	70	50	23	2.68	
HYDRAZINES AND DERIVS.	UNSUB	19	79	33	12	2.39	
HYDRAZINES AND DERIVS.	SUB	31	61	65	12	.94	
HYDROCARBONS	UNSUB	15	49	94	4	.17	
HYDROXY DERIVS. OF HETERO	MIXED	39	48	69	6	.35	
HYDROXYLAMINES AND DERIV.	UNSUB	8	65	18	1	.30	
HYDROXYLAMINES AND DERIV.	SUB	28	59	65	10	.76	
IMIDES	UNSUB	96	46	125	28	.86	
IMIDES	MONOSUB ACIDS	3	36	154	0	.00	
IMIDES	MONOSUB ALCOHOLS	5	74	22	1	.28	
IMIDES	MONOSUB AMIDES	5	66	26	2	.42	
IMIDES	MONOSUB AMINES	9	46	63	1	.06	
IMIDES	MONOSUB ESTERS	6	34	418	2	.03	
IMIDES	MONOSUB ETHERS	6	-15	-199	0	.00	
IMIDES	MONOSUB HALIDES	33	53	99	10	.45	
IMIDES	MONOSUB HETEROCYCLIC COMPOUNDS	8	56	81	2	.12	
IMIDES	MONOSUB KETONES	2	2	950	0	.00	
IMIDES	MONOSUB NITRO COMPOUNDS	17	66	54	6	.61	
IMIDES	MONOSUB PHENOLS	2	63	29	0	.00	
IMIDES	MONOSUB MISCELLANEOUS	5	88	11	3	2.00	
IMIDES	POLYSUB	16	64	51	6	.63	
IMINES	UNSUB	6	68	26	1	.22	
IMINES	SUB	28	60	49	5	.51	
INORGANIC COMPOUNDS		10	40	66	0	.00	
IODONIUM COMPOUNDS	MIXED	24	76	31	11	2.25	
IRON COMPOUNDS	MIXED	2	65	38	1	.14	
ISOCYANATES	MIXED	8	33	110	2	.05	
KETONES	UNSUB MONOKETONES	22	62	48	5	.54	
KETONES	UNSUB POLYKETONES	22	49	72	3	.17	
KETONES	MONOSUB ACIDS	10	38	50	0	.00	
KETONES	MONOSUB ALCOHOLS	5	49	76	0	.00	
KETONES	MONOSUB AMIDES	17	35	199	4	.06	
KETONES	MONOSUB AMINES	12	72	28	4	.86	
KETONES	MONOSUB ESTERS	8	27	160	1	.01	
KETONES	MONOSUB ETHERS	8	54	52	1	.09	

TABLE II

<u>Functional Group</u>	<u>Substituent</u>	No. Tested	K	CV	No. K's >84	Repel- lency Index
KETONES	MONOSUB HALIDES	14	67	25	2	.45
KETONES	MONOSUB HETEROCYCLIC COMPOUNDS	19	70	40	7	1.02
KETONES	MONOSUB HYDROXYLAMINE DERIVATIVES	3	43	87	1	.04
KETONES	MONOSUB IMIDES	2	2	950	0	.00
KETONES	MONOSUB LACTAMS	2	63	29	0	.00
KETONES	MONOSUB LACTONES	4	41	101	0	.00
KETONES	MONOSUB NITRILES	11	57	41	2	.23
KETONES	MONOSUB NITRO COMPOUNDS	6	26	143	0	.00
KETONES	MONOSUB PHENOLS	12	45	34	0	.00
KETONES	MONOSUB QUATERNARY NITROGEN COMPS.	2	94	3	2	5.22
KETONES	MONOSUB SULFONAMIDES	2	49	50	0	.00
KETONES	MONOSUB MISCELLANEOUS	5	64	23	0	.00
KETONES	DISUB ACID-HETEROCYCLIC COMPOUNDS	2	48	54	0	.00
KETONES	DISUB ALCOHOL-HETEROCYCLIC COMPOUNDS	2	-9	-55	0	.00
KETONES	DISUB AMIDE-HALIDES	2	68	5	0	.00
KETONES	DISUB AMINE-HALIDES	4	62	32	1	.16
KETONES	DISUB AMINE-HETEROCYCLIC COMPOUNDS	3	55	20	0	.00
KETONES	DISUB AMINE-PHENOLS	2	50	26	0	.00
KETONES	DISUB ESTER-HALIDES	2	53	11	0	.00
KETONES	DISUB HETEROCYCLIC-NITRO COMPOUNDS	4	77	47	3	.41
KETONES	DISUB MISCELLANEOUS	30	62	54	8	.77
KETONES	POLYSUB	10	47	64	1	.06
LACTAMS	MIXED	36	60	64	11	.86
LACTONES	UNSUB	13	55	68	4	.27
LACTONES	SUB	63	45	116	11	.36
MERCURY COMPOUNDS	MIXED	25	81	37	17	3.10
NICKEL COMPOUNDS	MIXED	28	48	58	2	.14
NICOTINE DERIVATIVES	MIXED	46	86	22	35	11.40
NITRILES	UNSUB	25	67	66	14	1.18
NITRILES	MONOSUB AMIDES	6	56	54	2	.17
NITRILES	MONOSUB AMINES	17	72	40	9	1.35
NITRILES	MONOSUB CARBAMATES	4	71	12	1	.49
NITRILES	MONOSUB ESTERS	12	65	50	4	.43
NITRILES	MONOSUB ETHERS	6	83	12	3	1.73
NITRILES	MONOSUB HALIDES	8	68	34	4	.67
NITRILES	MONOSUB HETEROCYCLIC COMPOUNDS	11	78	25	7	1.82
NITRILES	MONOSUB HYDRAZINES AND DERIVATIVES	2	95	5	2	3.17
NITRILES	MONOSUB KETONES	11	57	41	2	.23
NITRILES	MONOSUB NITRO COMPOUNDS	2	66	33	1	.17
NITRILES	MONOSUB PHENOLS	2	77	24	1	.27
NITRILES	MONOSUB PHOSPHORUS COMPOUNDS	2	62	58	1	.09
NITRILES	MONOSUB SULFIDES	2	78	12	1	.54
NITRILES	MONOSUB SULFONES	2	49	46	0	.00
NITRILES	MONOSUB THiocarbamates	4	55	33	0	.00
NITRILES	MONOSUB MISCELLANEOUS	11	55	94	4	.20
NITRILES	POLYSUB AMIDE-ESTERS	2	22	168	0	.00
NITRILES	POLYSUB AMINE-ETHERS	3	92	7	2	2.19

TABLE II

<u>Functional Group</u>	<u>Substituent</u>	<u>No.</u>	<u>Tested</u>	<u>K</u>	<u>CV</u>	<u>No. K's &gt;84</u>	<u>Repel-lency Index</u>
NITRILES	POLYSUB AMINE-HALIDES	2	77	7	0	.00	
NITRILES	POLYSUB AMINE-HETEROCYCLIC COMPOUNDS	5	35	93	1	.03	
NITRILES	POLYSUB AMINE-PHENOLS	2	66	12	0	.00	
NITRILES	POLYSUB CARBAMATE-HALIDES	2	68	22	0	.00	
NITRILES	POLYSUB ETHER-HALIDES	2	92	8	1	.96	
NITRILES	POLYSUB MISCELLANEOUS	15	71	23	4	1.03	
NITRO COMPOUNDS	UNSUB	13	85	22	7	2.25	
NITRO COMPOUNDS	MONOSUB ACIDS	4	38	87	0	.00	
NITRO COMPOUNDS	MONOSUB ALDEHYDES	2	63	18	0	.00	
NITRO COMPOUNDS	MONOSUB AMIDES	36	71	45	21	2.76	
NITRO COMPOUNDS	MONOSUB AMINES	10	71	30	4	.79	
NITRO COMPOUNDS	MONOSUB CARBAMATES	7	77	23	4	1.12	
NITRO COMPOUNDS	MONOSUB ESTERS	5	65	36	2	.30	
NITRO COMPOUNDS	MONOSUB ETHERS	18	72	26	6	1.38	
NITRO COMPOUNDS	MONOSUB HALIDES	24	77	34	10	1.89	
NITRO COMPOUNDS	MONOSUB HETEROCYCLIC COMPOUNDS	23	77	33	14	2.72	
NITRO COMPOUNDS	MONOSUB HYDRAZIDES	17	79	34	12	2.32	
NITRO COMPOUNDS	MONOSUB HYDRAZINES AND DERIVATIVES	3	68	30	1	.19	
NITRO COMPOUNDS	MONOSUB IMIDES	17	66	54	6	.61	
NITRO COMPOUNDS	MONOSUB IMINES	11	63	21	1	.25	
NITRO COMPOUNDS	MONOSUB KETONES	6	26	143	0	.00	
NITRO COMPOUNDS	MONOSUB LACTONES	3	68	24	0	.00	
NITRO COMPOUNDS	MONOSUB NITRILES	2	66	33	1	.17	
NITRO COMPOUNDS	MONOSUB PHENOLS	9	87	12	5	3.02	
NITRO COMPOUNDS	MONOSUB PHOSPHORUS COMPOUNDS	3	54	122	2	.07	
NITRO COMPOUNDS	MONOSUB SULFIDES	3	51	65	1	.07	
NITRO COMPOUNDS	MONOSUB MISCELLANEOUS	7	66	56	3	.29	
NITRO COMPOUNDS	DISUB ACID-AMIDES	3	64	35	1	.15	
NITRO COMPOUNDS	DISUB ALCOHOL-HALIDES	4	73	42	3	.43	
NITRO COMPOUNDS	DISUB AMIDE-ETHERS	4	72	27	2	.44	
NITRO COMPOUNDS	DISUB AMIDE-HALIDES	10	53	33	1	.13	
NITRO COMPOUNDS	DISUB AMIDE-HETEROCYCLIC COMPOUNDS	3	96	1	3	24.00	
NITRO COMPOUNDS	DISUB AMINE-ETHERS	4	78	6	0	.00	
NITRO COMPOUNDS	DISUB AMINE-HALIDES	3	78	16	2	.81	
NITRO COMPOUNDS	DISUB ESTER-HALIDES	3	43	73	1	.05	
NITRO COMPOUNDS	DISUB ESTER-HETEROCYCLIC COMPOUNDS	12	86	13	9	4.96	
NITRO COMPOUNDS	DISUB ETHER-HALIDES	4	42	61	0	.00	
NITRO COMPOUNDS	DISUB ETHER-HETEROCYCLIC COMPOUNDS	5	93	6	4	5.17	
NITRO COMPOUNDS	DISUB ETHER-PHENOLS	3	88	4	2	3.67	
NITRO COMPOUNDS	DISUB ETHER-THIOCYANATES	2	89	10	1	.74	
NITRO COMPOUNDS	DISUB HALIDE-HETEROCYCLIC COMPOUNDS	6	87	15	2	.97	
NITRO COMPOUNDS	DISUB HALIDE-HYDRAZIDES	2	60	8	0	.00	
NITRO COMPOUNDS	DISUB HALIDE-IMIDES	4	89	7	3	3.18	
NITRO COMPOUNDS	DISUB HALIDE-PHENOLS	3	92	6	3	3.83	
NITRO COMPOUNDS	DISUB HETEROCYCLIC-HYDRAZIDES	3	41	74	0	.00	
NITRO COMPOUNDS	DISUB HETEROCYCLIC-KETONES	4	77	47	3	.41	
NITRO COMPOUNDS	DISUB HETEROCYCLIC-SEMICARBAZONES	3	73	35	2	.35	

TABLE II

<u>Functional Group</u>	<u>Substituent</u>	No. Tested	$\bar{K}$	CV	No. K's >84	Repel- lency Index
NITRO COMPOUNDS	DISUB MISCELLANEOUS	32	65	51	13	1.38
NITRO COMPOUNDS	POLYSUB	11	61	77	5	.33
NITROSO COMPOUNDS	MIXED	14	60	70	4	.29
PHENOLS	UNSUB	29	71	51	15	1.74
PHENOLS	MONOSUB ACIDS	11	56	47	2	.20
PHENOLS	MONOSUB ALCOHOLS	2	86	8	1	.90
PHENOLS	MONOSUB AMIDES	13	52	60	3	.22
PHENOLS	MONOSUB AMINES	16	77	34	8	1.51
PHENOLS	MONOSUB HALIDES	38	78	25	19	4.94
PHENOLS	MONOSUB HETEROCYCLIC COMPOUNDS	5	83	18	3	1.15
PHENOLS	MONOSUB IMIDES	2	63	29	0	.00
PHENOLS	MONOSUB IMINES	5	63	59	1	.09
PHENOLS	MONOSUB KETONES	12	45	34	0	.00
PHENOLS	MONOSUB NITRILES	2	77	24	1	.27
PHENOLS	MONOSUB NITRO COMPOUNDS	9	87	12	5	3.02
PHENOLS	MONOSUB NITROSO COMPOUNDS	2	74	2	0	.00
PHENOLS	MONOSUB QUINONES	2	60	41	0	.00
PHENOLS	MONOSUB THIOCYANATES	8	98	3	8	21.78
PHENOLS	MONOSUB MISCELLANEOUS	11	68	37	3	.46
PHENOLS	DISUB ACID-HALIDES	4	95	4	4	7.92
PHENOLS	DISUB ALCOHOL-AMINES	7	79	32	4	.82
PHENOLS	DISUB ALCOHOL-HALIDES	3	77	12	1	.53
PHENOLS	DISUB AMIDE-ETHERS	2	26	3	0	.00
PHENOLS	DISUB AMIDE-HALIDES	27	86	20	20	7.17
PHENOLS	DISUB AMINE-KETONES	2	50	26	0	.00
PHENOLS	DISUB AMINE-NITRILES	2	66	12	0	.00
PHENOLS	DISUB CARBAMATE-QUINONES	2	-42	-10	0	.00
PHENOLS	DISUB ESTER-ETHERS	2	30	1	0	.00
PHENOLS	DISUB ETHER-IMINES	2	48	50	0	.00
PHENOLS	DISUB ETHER-NITRO COMPOUNDS	3	88	4	2	3.67
PHENOLS	DISUB HALIDE-IMINES	2	69	2	0	.00
PHENOLS	DISUB HALIDE-NITRO COMPOUNDS	3	92	6	3	3.83
PHENOLS	DISUB HALIDE-SULFIDES	2	86	11	1	.65
PHENOLS	DISUB MISCELLANEOUS	19	53	47	3	.28
PHENOLS	POLYSUB	20	65	59	8	.73
PHOSPHORUS COMPOUNDS	MIXED PHOSPHATES, ORTHO	13	74	33	6	1.12
PHOSPHORUS COMPOUNDS	MIXED PHOSPHITES	4	66	44	1	.12
PHOSPHORUS COMPOUNDS	MIXED PHOSPHONATES	18	73	26	5	1.17
PHOSPHORUS COMPOUNDS	MIXED PHOSPHONIUMS	9	90	10	7	5.25
PHOSPHORUS COMPOUNDS	MIXED THIOPHOSPHATES	4	58	96	3	.15
PHOSPHORUS COMPOUNDS	MIXED MISCELLANEOUS	9	69	54	5	.53
QUATERNARY NITROGEN COMP.	MIXED AMMONIUM COMPOUNDS	67	85	19	48	17.89
QUATERNARY NITROGEN COMP.	MIXED HETEROCYCLIC COMPOUNDS	68	76	45	43	6.05
QUINONES	MIXED	21	43	86	4	.17
SEMICARBAZIDES	MIXED	3	76	20	1	.32
SEMICARBAZONES	UNSUB	5	64	60	2	.18
SEMICARBAZONES	SUB	6	80	26	4	1.03

TABLE II

<u>Functional Group</u>	<u>Substituent</u>	No. Tested	K	CV	No. K's >84	Repel- lency Index
SULFONES	UNSUB	4	82	5	2	2.73
SULFONES	SUB	28	51	74	6	.34
SULFAMIDES	MIXED	3	61	24	0	.00
SULFANILAMIDES	MIXED	15	38	58	1	.05
SULFENAMIDES	MIXED	4	70	26	2	.45
SULFIDES	MIXED MONOSULFIDES	46	71	54	22	2.41
SULFIDES	MIXED POLYSULFIDES	12	42	86	3	.12
SULFINIC ACIDS	MIXED	1	89	0	1	99.99
SULFONAMIDES	UNSUB	6	64	35	2	.30
SULFONAMIDES	SUB	30	57	56	6	.51
SULFONIC ACIDS	UNSUB	4	21	254	0	.00
SULFONIC ACIDS	SUB	33	35	121	1	.02
SULFONIC ACIDS ESTERS	MIXED	7	48	51	0	.00
SULFOXYL HALIDES	MIXED	2	8	475	0	.00
SULFOXIDES	MIXED	6	44	129	3	.09
THIO AND ISOTHIOCYANATES	UNSUB	4	83	30	3	.69
THIO AND ISOTHIOCYANATES	MONOSUB ESTERS	6	82	13	2	1.05
THIO AND ISOTHIOCYANATES	MONOSUB ETHERS	6	83	18	4	1.54
THIO AND ISOTHIOCYANATES	MONOSUB HALIDES	3	96	4	3	6.00
THIO AND ISOTHIOCYANATES	MONOSUB PHENOLS	8	98	3	8	21.78
THIO AND ISOTHIOCYANATES	MONOSUB MISCELLANEOUS	6	85	12	2	1.18
THIO AND ISOTHIOCYANATES	POLYSUB	12	81	23	5	1.47
THIOAMIDES	MIXED	10	68	48	5	.59
THIOCARBOXYLATES	MIXED	3	72	19	1	.32
THIOCARBAMATES	UNSUB	25	52	23	15	4.46
THIOCARBAMATES	SUB	45	68	58	21	2.05
THIOCARBOHYDRAZIDES	MIXED	2	45	53	0	.00
THIOCARBONATES	MIXED	18	74	46	12	1.61
THIOLS	MIXED	30	63	56	11	1.03
THIONES	MIXED	1	71	0	0	99.99
THIOSEMICARBAZIDES	MIXED	1	96	0	1	99.99
THIOSEMICARBAZONES	MIXED	7	58	48	1	.10
THIOUREAS	UNSUB	97	79	29	54	12.26
THIOUREAS	MONOSUB ACIDS	6	29	162	0	.00
THIOUREAS	MONOSUB ALCOHOLS	3	79	4	0	.00
THIOUREAS	MONOSUB AMIDES	3	65	35	1	.15
THIOUREAS	MONOSUB AMINES	3	93	4	3	5.81
THIOUREAS	MONOSUB ESTERS	3	59	50	1	.10
THIOUREAS	MONOSUB ETHERS	10	76	35	5	.90
THIOUREAS	MONOSUB HALIDES	19	93	11	17	11.98
THIOUREAS	MONOSUB SULFONIC ACIDS	3	44	34	0	.00
THIOUREAS	MONOSUB MISCELLANEOUS	10	73	45	5	.68
THIOUREAS	POLYSUB	14	66	41	6	.80
THIURAMS	MIXED	16	74	37	7	1.17
TIN COMPOUNDS	MIXED	9	70	43	4	.54
UREAS	UNSUB	17	56	68	5	.34
UREAS	MONOSUB ACIDS	2	43	23	0	.00

TABLE II

<u>Functional Group</u>	<u>Substituent</u>	<u>No.</u>	<u>K</u>	<u>CV</u>	<u>No. K's &gt;84</u>	<u>Repellency Index</u>
		<u>Tested</u>				
UREAS	MONOSUB ALCOHOLS	2	10	470	0	.00
UREAS	MONOSUB AMINES	5	46	70	1	.05
UREAS	MONOSUB ESTERS	5	70	36	1	.16
UREAS	MONOSUB ETHERS	4	53	40	0	.00
UREAS	MONOSUB HALIDES	5	54	90	1	.05
UREAS	MONOSUB HETERO CYCLIC COMPOUNDS	4	60	41	1	.12
UREAS	MONOSUB MISCELLANEOUS	12	38	132	1	.02
UREAS	POLYSUB	17	38	89	1	.04
ZINC COMPOUNDS	MIXED	20	55	75	7	.43

TABLE III  
REPELLENCY TO RODENTS OF COMPOUNDS APPLIED TO BURLAP

Code No.	Burlap Treatment mg/in <sup>2</sup>	Carrier*	Test Rodent	Initial Test: % Protection		Storage Test Period		% Protection
4041	5	B	Mouse	100		2 mo	83	
						6 mo	44	
						1 yr	24	
						2 yr	62	
4073	5	A	Mouse	69		2 wk	96	
						2 mo	94	
						6 mo	75	
						1 yr	30	
4077	5	B	Mouse	63		2 wk	50	
						2 mo	50	
						6 mo	11	
						2 yr	45	
4259	5	C	Mouse	60		2 mo	28	
		D	Mouse	32		-	-	
4337	7	E	Mouse	87		3 mo	22	
		F	Mouse	85		6 mo	38	
4343	5	A	Mouse	45		-	-	
		C	Mouse	23		-	-	
4344	5	A	Mouse	26		-	-	
		C	Mouse	20		-	-	
4485	5	C	Mouse	48		2 mo	0	
4487	5	H	Mouse	73		3 mo	64	
		I	Mouse	100		6 mo	29	
						3 mo	52	
						6 mo	53	
4496	5	C	Mouse	-2		-	-	
4500	5	C	Mouse	-2		-	-	
4530	5	A	Mouse	52		2 mo	89	
						6 mo	10	

TABLE III

Code No.	Burlap Treatment mg/in <sup>2</sup>	Carrier*	Test Rodent	Initial Test: % Protection	Storage Test	
					Period	% Protection
4550	3.5	C	Mouse	-6	-	-
4551	5	G	Mouse	32	-	-
4552	5	J	Mouse	15	-	-
4568	5	A G	Mouse Mouse	51 9	2 mo -	16 -
4570	5	A G	Mouse Mouse	62 20	2 mo 6 mo -	50 49 -
4573	5	G	Mouse Rat	0 30	-	-
4575	5	A G	Mouse Mouse	56 27	2 mo -	40 -
4705	5	A	Mouse	53	2 mo 6 mo	59 51
4735	5	A	Mouse	95	2 mo 6 mo 1 yr 2 yr	78 85 68 20
4746	6	J	Mouse	34	-	-
4751	5	J	Mouse	42	-	-
4793	5	A G	Mouse Mouse	49 29	- 4 mo 7 mo	- 22 73
4812	5	A G	Mouse Mouse	75 26	2 mo 6 mo -	68 54 -
4826	5	A	Mouse	100	2 mo 6 mo 1 yr	100 62 29
4829	5	A	Mouse	88	2 mo 6 mo	60 35

TABLE III

Code No.	Burlap Treatment mg/in <sup>2</sup>	Carrier*	Test Rodent	Initial Test:		Storage Test	
				% Protection	Period	% Protection	Period
4833	5	A G	Mouse	22	-	-	-
			Mouse	20	-	-	-
4838	5	G	Mouse	17	-	-	-
			Rat	12	-	-	-
4840	5	A	Mouse	33	-	-	-
4938	5	A	Mouse	57	2 mo	58	
					6 mo	77	
					1 yr	63	
5112	5	A	Mouse	26	-	-	-
5122	5	A	Mouse	30	-	-	-
5127	5	A	Mouse	24	-	-	-
5129	5	A	Mouse	40	-	-	-
5253	5	A	Mouse	75	2 wk	84	
			Rat	70	2 mo	-4	
5359	5	A	Mouse	21	2 wk	69	
					2 mo	70	
5438	5	A	Mouse	73	2 wk	43	
					2 mo	14	
5440	5	A	Mouse	69	2 mo	78	
					6 mo	59	
					1 yr	60	
5442	5	A	Mouse	96	2 mo	73	
					8 mo	73	
					1 yr	-7	
5531	5	A	Mouse	50	2 mo	47	
					6 mo	56	
5564	5	A	Mouse	62	2 wk	68	
					2 mo	-7	
5591	5	A	Mouse	65	2 mo	78	
					6 mo	63	
					1 yr	31	

TABLE III

Code No.	Burlap Treatment mg/in <sup>2</sup>	Carrier*	Test Rodent	Initial Test:		Storage Test	
				% Protection	Period	% Protection	Period
5601	5	A	Mouse	79	2 mo 6 mo 1 yr	66 72 66	
5625	5	K	Mouse	79**	-	-	
5626	5	K	Mouse	75	2 mo 6 mo 1 yr	89 81 69	
		L	Mouse	0	-	-	
5627	5	A	Mouse	46	-	-	
5630	5	A	Mouse	31	-	-	
5631	5	A	Mouse	53	2 mo 6 mo	66 54	
5642	5	A	Mouse	14	-	-	
5643	5	A	Mouse	55	2 mo	44	
5662	5	A M	Mouse Mouse	88 53	6 wk 2 mo 6 mo	14 69 41	
5680	5	A	Mouse	92	2 wk 2 mo	92 -4	
	10	N	Rat	55	-	-	
5691	5	O	Mouse	12	-	-	
5702	5	A	Mouse	14	-	-	
5704	5	A	Mouse	0	-	-	
5710	5	A	Mouse	41	-	-	
5767	5	J	Mouse	41	-	-	
5796	5	D	Mouse	73	2 mo 6 mo	76 16	
5809	7.6	D	Mouse	35	-	-	
5821	5	A	Mouse	71	2 wk 2 mo	83 -15	
			Rat	-20	-	-	

TABLE III

Code No.	Burlap Treatment mg/in <sup>2</sup>	Carrier*	Test Rodent	Initial Test: % Protection	Storage Test	
					Period	% Protection
5858	5	A	Mouse	100	2 wk	84
					2 mo	82
					6 mo	14
5859	5	A	Mouse	88	2 wk	76
					2 mo	-2
	10	A	Rat	88	2 wk	63
					2 mo	66
					6 mo	33
5894	5	A	Mouse	74	2 mo	81
					6 mo	68
					1 yr	62
5895	3.5	A	Mouse	55	2 wk	77
					2 mo	35
					6 mo	18
6370	5	L	Mouse	24	-	-
6372	5	P	Mouse	57	3 wk	93
					2 mo	93
					4 mo	-8
6376	5	P	Mouse	20	-	-
6377	5	A	Mouse	80	2 wk	92
					2 mo	8
6378	5	A	Mouse	8	-	-
6401	5	A	Mouse	0	-	-
6405	5	A	Mouse	0	-	-
6406	5	A	Mouse	0	-	-
6410	5	A	Mouse	62	-	-
6443	5	A	Mouse	91**	-	-
6445	5	A	Mouse	70	1 yr	25
					-	-
	10	A	Mouse Rat	39 65	6 mo	22

TABLE III

Code No.	Burlap Treatment mg/in <sup>2</sup>	Carrier*	Test Rodent	Initial Test: % Protection	Storage Test	
					Period	% Protection
6450	5	A R	Mouse Mouse	50 6	-	-
6452	5	A	Mouse	46	-	-
6455	5	A	Mouse	76	2 wk	92
	10	A	Rat	42	2 mo 2 mo	20 10
6457	5	A	Mouse	23	-	-
6458	5	A	Mouse	33	-	-
6510	5	S	Mouse	68	-	-
6521	5	A	Mouse	74	2 mo	43
6548	5	A	Mouse	33	-	-
6552	5	T	Mouse	52	2 mo 6 mo	57 42
6565	5	U	Mouse	21	-	-
6567	5	D	Mouse	35	-	-
6569	5	L	Mouse	15	-	-
6733	5	A	Mouse	31	-	-
6735	5	A	Mouse	54	3 mo 6 mo	67 31
6737	5	A	Mouse	44	-	-
6738	5	A	Mouse	61	3 mo 6 mo	65 31
6759	5	A	Mouse Mouse	65 83	3 mo 6 mo	51 0
	5	A	Mouse	52	3 mo 6 mo	39 20

TABLE III

Code No.	Burlap Treatment mg/in <sup>2</sup>	Carrier*	Test Rodent	Initial Test: % Protection	Storage Test	
					Period	% Protection
6781	5	A	Mouse	84	3 mo	67
					6 mo	62
					1 yr	51
6803	5	A	Mouse	75	2 mo	73
					6 mo	73
					1 yr	42
6805	5	A	Mouse	29	-	-
6969	5	A	Mouse	73	2 mo	82
					6 mo	72
6998	5	A	Mouse	75	6 mo	19
7000	5	A	Mouse	58	6 mo	3
7004	5	A	Mouse	67	6 mo	17
7006	5	A	Mouse	38	-	-
7007	5	D	Mouse	47	-	-
7107	5	A	Mouse	88	2 mo	100
					6 mo	85
					1 yr	28
7138	10	A	Rat	53	-	-
					-	-
7142	5	W	Mouse	29	-	-
7144	5	A	Mouse	38	-	-
7146	5	A	Mouse	48	-	-
7147	5	A	Mouse	59	-	-
7148	5	A	Mouse	60	6 mo	75
					1 yr	24
7149	5	A	Mouse	64	-	-
7154	5	A	Mouse	68	6 mo	41
				93	6 mo	49

TABLE III

Code No.	Burlap Treatment mg/in <sup>2</sup>	Carrier*	Test Rodent	Initial Test: % Protection	Storage Test	
					Period	% Protection
7160	5	D	Mouse	26	-	-
7161	5	D	Mouse	48	-	-
7196	6.9	D	Mouse	33	-	-
7254	5	A	Mouse	-2	-	-
7277	5.7	A	Mouse	14	-	-
7280	5	A	Mouse	14	-	-
7289	5	A	Mouse	0	-	-
7291	5	A	Mouse	0	-	-
7292	5.6	D	Mouse	8	-	-
7296	5	A	Mouse	0	-	-
7299	4.3	A	Mouse	20	-	-

\*Carrier Formulations

- A. Acetone
- B. 2.5 mg Darvan #1, 5 mg Rhoplex AC-33 and 5 mg bentonite/in<sup>2</sup>
- C. Aqueous suspension acacia 5 mg/in<sup>2</sup>
- D. Aqueous suspension
- E. Acacia 7 mg/in<sup>2</sup> and 1-octanol
- F. Methocel 0.15 mg and glycerin 25 mg/in<sup>2</sup>
- G. Aqueous Methocel 3 mg/in<sup>2</sup>
- H. Methocel 1 mg and bentonite 5 mg/in<sup>2</sup>
- I. Ethanol-acetone (equal parts)
- J. Methocel 1.0 mg/in<sup>2</sup>
- K. Aqueous PVA 1.25 mg/in<sup>2</sup>
- L. Ethanol
- M. Aroclor 5460 5 mg/in<sup>2</sup> in kerosene
- N. Aqueous suspension bentonite 10 mg/in<sup>2</sup>
- O. Acetone-water (equal parts)
- P. Aqueous suspension Methocel 3 mg and bentonite 5 mg/in<sup>2</sup>
- Q. 5 mg Rhoplex AC-33 and bentonite/in<sup>2</sup>
- R. Suspension in 0.25% Carbopol and 1% NaOH
- S. Chloroform

TABLE III

\*Carrier Formulations

- T. Bentonite 5 mg/in<sup>2</sup> suspension in acetone-water (equal parts)
- U. Carbon tetrachloride
- V. Aqueous PVAC 62.5 mg
- W. Rhoplex AC-33 3 mg/in<sup>2</sup>

Use of trade names does not imply endorsement of commercial products by Federal Government.

\*\*compound decomposed during storage period.

## APPENDIX I

### SOURCES OF COMPOUNDS TESTED

The following private companies, institutions, and Federal laboratories supplied the compounds tested:

Aerojet-General Corporation  
Azusa, California

American Potash and Chemical Corporation  
3000 West Sixth Street  
Los Angeles, California

The Baker Castor Oil Company  
40 Avenue A  
Bayonne, New Jersey

Battelle Memorial Institute  
505 King Avenue  
Columbus, Ohio

Bucknell University  
Lewisburg, Pennsylvania

Callery Chemical Company  
Callery, Pennsylvania

Chemical-Biological Coordination Center  
National Research Council  
Washington, D.C.

Ciba Pharmaceutical Company  
Division of Ciba-Geigy Corporation  
556 Morris Avenue  
Summit, New Jersey

Climax Molybdenum Company  
Division of American Metal Climax, Incorporated  
1270 Avenue of the Americas  
New York, New York

Commercial Solvents Corporation  
Terre Haute, Indiana

Department of the Navy  
United States Naval Research Laboratories  
Washington, District of Columbia

APPENDIX I - Continued

The Dow Chemical Company  
Midland, Michigan

E. I. duPont de Nemours and Company  
Wilmington, Delaware

Geigy Pharmaceuticals  
Division of Ciba-Geigy Corporation  
Saw Mill River Road  
Ardsley, New York

General Chemical Division  
Allied Chemical Corporation  
Morristown, New Jersey

General Mills, Incorporated  
2010 East Hennepin Avenue  
Minneapolis, Minnesota

The General Tire and Rubber Company  
1708 Englewood Avenue  
Akron, Ohio

B. F. Goodrich Chemical Company  
Division of B. F. Goodrich Company  
3135 Euclid Avenue  
Cleveland, Ohio

Hercules Powder Company, Incorporated  
910 Market Street  
Wilmington, Delaware

Jefferson Chemical Company, Incorporated  
7114 North Lamar Boulevard  
Austin, Texas

Eli Lilly and Company  
Indianapolis, Indiana

Maumee Chemical Company  
1310 Expressway Drive  
Toledo, Ohio

McLaughlin Gormley King Company  
8810 Tenth Avenue North  
Minneapolis, Minnesota

APPENDIX I - Continued

M and T Chemicals, Incorporated  
Rahway, New Jersey

Mellon Institute  
Pittsburg, Pennsylvania

Monsanto Company  
800 North Lindbergh Boulevard  
St. Louis, Missouri

Montrose Chemical Division  
Baldwin-Montrose Chemical Company, Incorporated  
100 Lister Avenue  
Newark, New Jersey

Morton Chemical Company  
Division of Morton International, Incorporated  
11710 Lake Avenue  
Woodstock, Illinois

Nalco Chemical Company  
6216 West 66th Place  
Chicago, Illinois

National Aniline Division  
Allied Chemical Corporation  
40 Rector Street  
New York, New York

Niagara Chemical Division  
FMC Corporation  
100 Niagara Street  
Middleport, New York

Naugatuck Chemical  
Naugatuck, Connecticut

Nopco Chemical  
Sixty Park Place  
Newar , New Jersey

Nuodex Products Company  
Division of Heyden Newport Chemical Corporation  
Elizabeth, New Jersey

APPENDIX I - Continued

Ozark-Mahoning Company  
Chemical Division  
310 West Sixth Street  
Tulsa, Oklahoma

S. B. Penick and Company  
100 Church Street  
New York, New York

Pennwalt Chemicals Corporation  
3 Penn Center Plaza  
Philadelphia, Pennsylvania

Chas. Pfizer and Company, Incorporated  
235 East 42nd Street  
New York, New York

Phillips Petroleum Company  
Bartlesville, Oklahoma

The Quaker Oats Company  
Merchandise Mart Plaza  
Chicago, Illinois

Rohm and Haas Company  
Independence Mall West  
Philadelphia, Pennsylvania

Scientific Chemicals, Incorporated  
1637 South Kilbourn Avenue  
Chicago, Illinois

The Sherwin-Williams Company  
Pigment, Color, and Chemical Division  
260 Madison Avenue  
New York, New York

Sowa Chemical Company  
305 East 46th Street  
New York, New York

Stecker Chemicals, Incorporated  
45 North Broad Street  
Ridgewood, New Jersey

Sterling-Winthrop Research Institute  
Division of Sterling Drug, Incorporated  
Rensselaer, New York

APPENDIX I - Continued

Sun Oil Company  
1608 Walnut Street  
Philadelphia, Pennsylvania

Tennessee Corporation  
44 Broad Street, NW.  
Atlanta, Georgia

Tennessee Eastman Company  
Division Eastmen Kodak Company  
Kingsport, Tennessee

Union Carbide Corporation  
270 Park Avenue  
New York, New York

United States Department of Agriculture  
Agricultural Research Service  
Eastern Regional Laboratories  
Philadelphia, Pennsylvania

United States Department of Agriculture  
Agricultural Research Service  
Entomology Research Division  
Beltsville, Maryland

United States Department of Agriculture  
Agricultural Research Service  
Northern Regional Laboratories  
Peoria, Illinois

United States Department of Agriculture  
Agricultural Research Service  
Southern Regional Laboratories  
New Orleans, Louisiana

United States Department of the Interior  
Bureau of Sport Fisheries and Wildlife  
Patuxent Wildlife Research Center  
Laurel, Maryland

V-C Chemical Company  
Division of Socony Mobil  
401 East Main Street  
Richmond, Virginia

## APPENDIX II

The code number, pagination and structural formula, expressed by the Wiswesser Line-Formula Notation, for compounds listed in Table I

Code No.	Page No.	Wiswesser Line-Formula Notation
2701	133	T3MTJ
2702	80	1VOIVOR B
2703	81	1U2OVY6OVYU16 1VOIVO2U1
2704	25, 57	Q2M2Q &.H2-SI-F6
2705	55	2N26R D- 2
2706	54	Z8 8Z8 &.H2-SI-F6
2707	54	4M4 84M4 &.H2-SI-F6
2708	53	ZR 8ZR &.H2-SI-F6
2709	54	ZR B 8ZR B &.H2-SI-F6
2710	49, 65	T C666 BN ISJ BVR& FN181 LN181
	154	
2711	53	Z1 8Z1 &.H2-SI-F6
2712	53	ZY 8ZY &.H2-SI-F6
2713	55	1N181R & 2 &.H2-SI-F6
2714	53	Z6Z &.H2-SI-F6
2715	26, 57	QX66MXQ & 2 &.H2-SI-F6
2716	104	ZYZUM & 2 &.H2-SI-F6
2717	151	T6M DOTJ & 2 &.H2-SI-F6
2718	53	Z18 8Z18 &.H2-SI-F6
2719	53	Z4 8Z4 &.H2-SI-F6
2720	53	L6TJ AZ & 2 &.H2-SI-F6
2721	32, 102	T6OTJ BO2U1 CQ DQ
	160	
2722	55	9MX661X & 2 &.H2-SI-F6
2723	54	L B666&TTJ A EY K1Z K &.H2-SI-F6
2724	54	WNR CNW ENW 8ZR CZ
2725	146, 190	T6NJ C- BT5KTJ A16 A &SCN
	221	
2727	146, 190	T6NJ C- BT5KTJ A4 A &WSO&R D
	220	
2728	159, 199	T5OJ B1U1R BNW DNW FNW
2731	147, 190	T6NJ C- BT5KTJ A16 A &E
	221	
2734	157, 180	T56 BO DO CHJ G1U1VR
2735	95, 179	10R B1U1VR
2736	101, 158	T5OJ BNW E101
	203	
2737	132, 199	T56 BMNNJ HNW
2738	148	T6NJ B1U1R
2739	144	T6NJ B1U1R& F1U1R
2740	146, 190	T6NJ C- BT5KTJ A A &E
	221	
2741	139, 190	T6KJ A C- BT5KTJ A A &E &E
	219	

<u>Code No.</u>	<u>Page No.</u>	<u>Wissesser Line-Formula Notation</u>
2742	139, 190 219	T6KJ A C- BT5KTJ A A &I &I
2744	146, 190 220	T6NJ C- BT5KTJ A4 A &SCN
2745	114, 146 190, 221	T6NJ C- BT5KTJ A1R BG DG& A &G
2746	114, 146 190, 221	T6NJ C- BT5KTJ A1R CG DG& A &G
2747	114, 146 190, 220	T6NJ C- BT5KTJ A1R BG& A &SCN
2748	146, 190 220	T6NJ C-BT5KTJ A1R& A &SCN
2749	147, 190 221	T6NJ C- BT5KTJ A8 A &I
2750	147, 190 221	T6NTJ C- BT5KTJ A8 A &SCN
2751	139, 190 219	T6NJ A4 C- BT5KTJ A4 A &E &E
2752	147, 190 221	T6NJ C- BT5KTJ A A- 22 &E &E
2753	146, 190 221	T6NJ C- BT5KTJ A12 A &G
2754	89, 130 159, 206	T5QJ BNW E1OV1G
2755	175	.AL2.Q5.G
2756	17, 80	OVR BVO &.CU-ZH2
2757	17, 80	OVVO&OVVO &/-NA- 2 &-CU-
2758	17, 80	OVVO &.CU-ZH2
2759	21, 48 202	WNR CVMYVQ2VQ
2760	94, 147 188	T66 BNJ JO-HG-R
2761	138, 190 243	T6NJ C- BT5NTJ A &QVVO &QVVO &-ZN-
2762	80, 138 189	T6NJ C- BT5NTJ A &/QVR CVO 2 &-CU-
2763	80, 138 189	T6NJ C- BT5KTJ A & 2 &OV1U1VO &-CU- -C
2764	138, 189	T6NJ C- BT5NTJ A &QVR BQ &/QR BVO 2 &-CU-
2765	138, 189	T6NJ C- BT5NTJ A &QVR BQ &/QR BVO 2 &-CO-
2767	138, 190	T6NJ C- BT5NTJ A &QVR BQ &/QR BVO 2 &-MN-
2768	138, 189 190	T6NJ C- BT5NTJ A &QVR BQ &/QR BVO 2 &-NI-
2769	138, 190 243	T6NJ C- BT5NTJ A &QVR BQ &/QR BVO 2 &-ZN-
2770	138, 189	T6NJ C- BT5NTJ A &OVR & 2-CD-
2771	80, 138 189	T6NJ C- BT5NTJ A &OVR & 2-CU-
2772	138, 189	T6NJ C- BT5NTJ A &WNR BO CNW ENW & 3-AL-

<u>Code No.</u>	<u>Page No..</u>	<u>Wiswesser Line-Formula Notation</u>
2773	138, 190 243	T6NJ C- BT5NTJ A & .H-ZN-SCN3
2774	138, 190 243	T6NJ C- BT5NTJ A & ZN-SCN2
2775	134, 234	T5MYMTJ BUS
2776	114, 138 190, 219	T6NJ A1R CG DG& C- BT5KTJ A1R CG DG& A &G &G
2777	237	SUYZM1
2778	236	SUYZN1&1
2779	237	SUYZM2
2780	236	SUYM2&M2
2781	237	SUYM2&M 22
2782	237	SUYM2&M 24
2783	29, 237	SUYM2&M2Q
2784	139, 190 219	T6KJ A C- ET5KTJ A A &/WSO&R D 2
2785	147, 190 221	T6NJ C- BT5KTJ A16 A &WSO&R D
2786	146, 190 221	T6NJ C- BT5KTJ A12 A &WSO&R D
2787	95, 161 187	T C566 DVOTTJ HR CO1 DO1& KO1 LO1
2788	95, 161 187	T C566 DVOTTJ HR CO1 DO1& KO1 LO1
2789	87, 100 157, 186	T C566 DVOTT&J HR CO1 DOV1& KOV1 LO1
2790	87, 100 157, 186	T C566 DVOTT&J HR CO1 DOV1& KOV1 LO1
2791	94, 157 187	T C566 DVOTT&J HR COV1 DOV1& KOV1 LO
2792	84, 157 187	T C566 DVOTT&J HR COV1 DOV1& KOV1 LOV1
2793	84, 157 187	T C566 DVOTT&J HR COVR& DOVR&& KOVR& LOVR
2794	101, 157 186, 228	T C566 DVOTT&J HR CO1 DOSWR D& KOSWR D& LOSWR D
2795	101, 157 186, 228	T C566 DVOTT&J HR CO1 DOSWR D& KOSWR D& LOSWR D
2796	158, 205 222	T5OJ BNW E1UNMVZ
2797	161, 183 205	T5OJ EV1 ENW
2798	51, 158 203	T5OJ EV2 ENW
2799	158, 205 222	T5OJ BNW E1UNMVVZ
2800	33, 52 103, 214	L66&TJ CQ DO1 HVZ I1Q JR DQ CO1

<u>Code No.</u>	<u>Page No.</u>	<u>Wiswesser Line-Formula Notation</u>
2801	62, 161 187	T56 BVO DHJ DR DN1&16 DR DN 1& 1
2802	61, 161 187	T56 BVO DHJ DR DN16 16 DR DN 1& 16 HN 16 1
2803	71, 148 162, 185	T C666 BO IXJ EN2&2 MN2&2 I-& DT56 BVMXJ
2804	139, 190 219	T6KJ A12 C- BT5NTJ A12 A -&/WNR BO CNW ENW 2
2805	146, 190 221	T6NJ C- BT5KTJ A12 A &OV8U9
2806	60, 147	T66 BNJ C1U1R DN2&2
2807	139, 190 219	T C5 J5 O6-14-6 A O- GK JK SK VKTT&T&J G J 8/E 4
2808	62, 191	1N1&R D- 2XR&CN
2824	248	.C12-H20-010-VM6VM-
2825	104	EYR&1R
2826	105	ER DR DE
2827	207	QR BQ DR
2828	181, 210	QR DVR
2829	24	QYR&1Q
2830	16	L6TJ A1VQ
2831	18, 91	QVYOR
2832	23	QR BY
2833	156, 185	T B555 A 1B J BX DVOTJ A A
2834	16	L46 ATJ A A E1VQ
2835	20, 207	QVR BQ CR
2836	20, 207	QVR BQ ER
2837	27, 91	L66J BO3Q
2838	207	QR DXR
2839	27, 91	QY1OR DR
2840	207	QR DX2&R DQ
2841	90	RR BO2OR BR
2842	163	T C666 BO ISJ
2843	114, 179	L6V DHJ-/G 5
2844	94, 111	G2OR
2845	114, 179	GR DVR
2846	94, 111	ER DOR DE
2847	19, 106	L55 ATJ A A B1VQ CG
2848	27, 106	L55 ATJ A A B2Q CG
2849	163, 228	T C666 BO ISJ IO
2850	82, 111	L55 ATJ A A B2OV1 CG
2851	94, 111	G2OR BR
2852	215	RR BO 3PO
2853	201, 210	WNR BQ CR& ENW
2854	19, 143	T56 BMJ D2VQ
2855	19, 132	T56 BMJ D3VQ
2856	26, 57	QY1MR
2857	191	NCYR&R
2858	154, 228	T C666 BM ISJ IO

<u>Code No.</u>	<u>Page No.</u>	<u>Wiswesser Line-Formula Notation</u>
2859	132, 225	T5NJ AR DSZW
2860	32, 51 225	ZSWR DMVYQYQYQYQ1Q
2861	113, 175	GR CE D-I-R DG BE &G
2862	113, 175	GR CE D-I-R DG BE &I
2863	113, 175	GR CE D-I-R DG BE & 2 &.S-O4
2864	113, 176	GR CG D-I-R BG DG &G
2865	113, 176	GR CG D-I-R BG DG
2866	113, 176	GR CG D-I-R BG DG & 2 &.S-O4
2867	114, 176	GR BG D-I-R CG DG &G
2868	114, 176	GR BG D-I-R CG DG &I
2869	114, 176	GR BG D-I-R CG DG & 2 &.S-O4
2870	113, 176	ER D-I-R DE &G
2871	113, 176	ER D-I-R DE
2872	113, 176	ER D-I-R DE & 2 &.S-O4
2873	114, 176	FR D-I-R DF &G
2874	114, 176	FR D-I-R DF &I
2875	16, 188	1VO-HG-R
2876	215	2OPO&O2& 22
2877	215	L66J B1PQQO
2878	116, 215	GR CG D1PO&O2&O2
2879	117, 215	GR BG D1PO&O2&O2
2880	102, 129 215	GR CG D02OPO&O2&O2
2881	215	L66J B1PO&O2&O2
2882	216	L66J B1OP&O2&O2
2883	215	L66J B1OP&O2&O2
2884	215	L66J B2OPO&O2&O2
2885	215	L66J B2OP&O2&O2
2886	148, 167	T66 BNJ JQ
2887	148, 167	T66 BNJ JQ & H3-P-O4
2888	25, 56	1N1&R DYQR DN1&1
2889	37	11VMR
2890	68, 88 183	2OYVY1&Y/R DN1&1 2
2891	38	6U3U8VMR
2892	60, 147	T66 BNJ C1Y/R DN1&1 2
2893	201, 216	WNR DO 3PS
2894	166	L66J B H
2895	166	L66J C H
2896	166	L66J C D
2897	166	L66J C I
2898	166	L66J C D H
2899	221	L C666 BV IVJ E2
2900	210, 222	L C666 BV IVJ EQ GQ
2901	90	1OR DO1
2902	90	2CR DO2
2903	20, 178	QV2VR B D F
2904	90	4OR DO4

<u>Code No.</u>	<u>Page No.</u>	<u>Wiswesser Line-Formula Notation</u>
2905	177	L3TJ AVR& EVR& CR
2906	157, 180	T5OVTJ CR& DR& EVR
	186	
2907	84, 179	1OVYR&1VR DR
2908	211, 223	1X&R DQ C- 2S
2909	22, 128	QVR BVR DE
	183	
2910	134, 167	T6NYY ENJ BUM CUNQ DQ FQ
	168, 175	
	242	
2911	64, 151	T6MVMVJ FZ
	241	
2912	64, 151	T6MVMVJ EZ FZ & 2 &. H2-S-04
	241	
2913	40, 57	ZR B D EMVR
2914	47, 207	L C666J EVMR& FQ
2915	73	ZVO1YU1
2916	58, 109	FXFFR CZ EXFFF
2917	135	T56 BMJ
2918	54	ZR B E D1R DZ B E
2919	63, 228	WSQR DN1&1
2920	67, 124	WS2&R BZ DXFFF
	226	
2921	68, 102	WS2&R CZ DO1
	226	
2922	50, 122	GR DMV1V1
	182	
2923	141, 169	T56 BVNVJ C3
2924	141, 169	T56 BVNVJ C8
2925	140, 169	T56 BVNVJ C12
2926	141, 169	T56 BVNVJ CR D
2927	140, 169	T56 BVNVJ C
2928	140, 169	T56 BVNVJ C2
2934	112, 132	T C555 A DVNV IUTJ AG AG BG E5 HG IG JG
	172	
2935	19, 131	T B555 A 1B J BXVNV IUTJ D1VQ
	180	
2936	116, 209	QR XG DR
2937	116, 209	QR XG BR
2938	116, 209	QR DG ER
2939	116, 209	QR BG DG FG
2940	38	ZVYU1&1VZ
2941	133, 169	T6VNVTJ B2
2942	149, 170	T5VNVTJ B
2943	149, 170	T5VNVTJ B2
2944	149, 170	T5VNVTJ BY
2945	149, 170	T5VNVTJ B3
2946	148, 170	T5VNVTJ B2U1
2947	140, 169	T56 BVNVJ CY

Code No.	Page No.	Wiswesser Line-Formula Notation
2948	139, 169	T56 BNVJ C2U1
2949	133, 169	T6VMVTJ
2950	133, 169	T6VNVTJ BR
2951	38	RMV3VMR
2952	133, 169	T5VNVTJ BR& D
2953	17, 39	QVYU1VMR D
2954	133, 169	T5VNVTJ BR D& D
2955	149, 170	T5VNVTJ B D
2956	149, 170	T5VNVTJ B2 D
2957	149, 170	T5VNVTJ B3 D
2958	149, 170	T5VNVTJ BR& D
2959	149, 170	T5VNVTJ BR, D& D
2960	140, 169	T56 BNVJ C1Y
2961	141, 169	T56 BNVJ CR B
2962	141, 169	T56 BNVJ CR C
2963	140, 169	T56 BNVJ C10
2964	18, 39	QV1U1VMR D
2965	137, 169	T5VNVTJ BR D
2966	149, 170	T5VNVTJ B1Y
2967	141, 169	T56 BNVJ C5
2968	137, 169	T5VNVTJ B12
2969	149, 170	T5VMVTJ D
2970	232	NCS12
2971	105	GXGGYR DF&R DF
2972	248	D6-CR-OVD-CR-QDJ AG AG C17 EG EG
2973	248	D6-CR-OVD-CR-QDJ AG AG CYU1 EG EG
2974	222	L6V DVJ BY E
2975	181, 210	QR CV1
2976	94, 111	GXGGYR DO2&R DO2
2977	116, 209	QR BG DG
2978	22, 213	L66J CQ DVQ HSWQ
	227	
2979	33, 214	QPQO&YQR D
	215	
2980	31, 120	GR CG DYQPO&O2602
	215	
2981	52, 242	ZVMYZUM & H2-S-04
2982	132, 169	T C555 A DVNV IUTJ E5
2983	174, 210	QR B1UNR
2984	101, 174	QR B1UNR DO2
	213	
2985	181, 201	WNYR&YR&1VR DR
2986	61, 168	QNUY&Y&UN 22
2987	168, 174	D656 1A M A-FE-ON FND IND LNO&T&J D E J K
	176	
2988	61, 168	QNUY&Y&UN 2 BR
2989	104, 194	NCNYZUNCN &-KA-
2990	79, 229	1N1&YUS&S 2-CU-
2991	154	T C666 BM ISJ

<u>Code No.</u>	<u>Page No.</u>	<u>Wiswesser Line-Formula Notation</u>
2992	112, 133	T6N CN ENJ BG DG FG
2993	32, 121	ZVMYQXGGG
	243	
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3492	35	L6TJ ANV1&Y
3493	54	L6TJ AM5
3494	55	L6TJ A- 2N1

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3507	55	L6TJ AN1R&1R
3509	55	L6TJ ANR&1R
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3515	55	L6TJ AN1&1R
3516	18, 56	L6TJ AM1VQ
3517	55	L6TJ AN1R&Y
3518	56	Z2M2M12
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3525	62, 197	L6TJ A- 2NR BNW DNW
3526	115, 208	QR XG XG XG XG X- 2
3529	35	5N5&V1
3531	55	6 N6&2N6&6
3532	53	Z16
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3534	37	L6TJ AMV11
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3537	135	T5N CN AUTJ B C12
3538	55	L6TJ ANA&5
3542	176	T B656 H-I-J &G
3543	20, 176	QVR X-I-R XVQ &I
3544	175, 242	1VMVMR D- 2-I- &I
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3573	163, 180	T56 BSJ DV1
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3868	218	12K &WSO&R CNW
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3875	215	2OPO&O2& 22
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3972	32, 69 160	T6OTJ BN2Q2Q CQ EQ EQ F1Q
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3979	144, 220	T6KJ A5 &WSO&R
3980	217	1K1R &WSO&R D
3981	152, 219	T6K DOTJ A5 A &WSO&R
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4024	115, 198	WNR CG DG FNW
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4034	115, 199	L6TJ AG B1UY2&NW
4035	59, 145	T6N C.TJ AY6 CY6 EZ E
4036	145, 199	T6N CNTJ AY6 CY6 ENW E
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4045	196	WNY&U1R CNW
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4048	133,231	T56 BN DNJ CS 2YUS
4049	240	L6TJ A- 2NYUSE 2S
4050	211,232	QR DSCN
4052	80,155	T6N CS DHJ D D F BSH 8-CU-
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4053	79,132	T56 BM DNJ CS 2-CU-
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4054	132,234	T56 BM DNJ CS 2-ZN-
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4055	211,232	QR B DSCN
4056	210,232	QR B2 DSCN
4057	211,232	QR C E DSCN
4058	211,232	QR B F DSCN
4059	132,231	T56 BM DNJ CSV02
4060	211,232	NCSR DQ CY
4061	211,232	NCSR DQ B EY
4062	210,232	NCSR DQ C EX
4063	152	T5N DOTJ A12
4064	152	T5N DOTJ A12 C E
4065	146	T5NTJ A12
4066	55	12N1&1
4073	154,231	T6NYS ENIJ A BUS E
4075	134	TSN CNJ AOV1 B17
4076	240	1N1&YUS&S 2S
4077	196	WN1U1R
4078	196	WNYU1R
4079	196	WNY2&U1R
4080	196	WNY3&U1R
4081	156,199	T5OJ B1UY2&NW
4082	127,158	T5CJ B1UYENW
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4083	156,199	T56 BO DO CHJ G1UY2&NW
4084	196	WNYU1R D
4085	95,198	WNY2&U1R D01
4086	115,199	WNY2&U1R BG DG
4087	115,199	WNY2&U1R CG DG
4088	101,204	WNY2&U1R DQ C01
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4089	201,210	WNYU1R DQ
4090	115,199	WNY1U1R
4091	166,200	L6YTJ AUNMR BNW DNW
4092	53	L66J XZ XZ XZ
4093	53	L6TJ AMV1
4094	53	L66J XZ XZ XZ 6/GH 3

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4100	17, 24	QY6&2U8VO & 2-CA-
4101	17, 24	QY6&2U8VO &-NA-
4102	155, 186	T6OV DOTJ
4103	20, 178	L4TJ AV1 B B C1VQ
4104	17	L4TJ AVQ B B C1VQ
4105	24	L4F ATJ A A EQ E
4106	248	T5 I6 F666/FO/FS 3AEF S BVOV FX RUTJ JVQ J N RY
4107	81	L55 A CUTJ FVO14 GVO14
4108	82, 111	G1VOR-/G 5
4109	231	SUYO2&SV02
4110	116, 215	E1YE1O 3PO
4111	114, 179	L C555 A AV DV EU IUTJ-/G 8
4112	223, 226	WSR&SR
4113	79, 128	GR BG DG EOVO 22
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4117	73	1Y&OVMR CMVOY
4118	40, 82	4Y2&VOYVMR
4119	89, 129	GXGGYMQYV1&VO2
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4123	248	/YR DSWO&1/ &-NA-
4130	105	GXR&R& 2
4131	96, 221	L6V DVJ BR DO2
4132	115, 208	L66J BE CQ HE
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4134	158, 166	T5OJ B1UN 2
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4136	77, 155	T5N CSJ BMVO2
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4138	178	1V1U1R
4139	67, 124	ZR BG DNW
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4141	94, 111	GR DO10R DG
4142	105	E1YEYE1E
4145	116, 209	QR BG DX&ER DQ CG
4146	202, 230	RSVM2 2XNWNW
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4153	132	T56 BM DNJ CV- AL6TJ
4155	105	ER CR
4156	105	IR BR
4157	166	1R DYL&R D
4158	90	RYR&OYR&R
4159	16	1U2U1VO-AG-
4160	177	L6V CVTJ E E
4161	19, 160	T56 BO DO CHJ G1VQ
4162	160, 180	T C565 DO FO JV EH&GTJ
4163	19, 160	T56 BO DO CHJ G2VQ
4164	95, 179	L6V BUTJ CO2 E E
4165	28, 178	L6VTJ CQ CR
4166	27, 162	T56 BO DO CHJ GY2Q2Q
4167	83, 162	T6OTJ BYVO2&VO2
4168	177	L6V BUTJ DR D
4169	26, 81	QX2&R&1VO2
4170	95, 179	1OR DV2R
4171	177	L6V BUTJ CR DR
4172	16	L66 A BTJ A A CR& DVQ EVQ GR
4173	114, 179	GR D1U1VR
4174	100, 126	T6OTJ BO1 CE
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4177	114, 179	L6V BUTJ CR CG
4178	51, 102	T56 BO DO CHJ G2MVR CO1 DO1 EC1
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4179	222	ZVMNU2U2U1
4180	37	L6TJ A1VZ DR
4181	181, 201	WNR D1U1VR
4182	59, 156	T56 BO DO CHJ G2 2M &GH
4183	58, 93	1N16R D- 2YR DO1
4184	55	1N16R D- 3Y
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4186	201, 210	WNR BQ CR& ENW
4187	116, 215	GR BO 3PO
4188	154	T C666 BM ISJ
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4203	114, 179	L55 A CVTJ A A B DE
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4208	240	1N1&YUS&S 2
4209	105	E1YEYE1E
4211	104	ER DE
4212	116, 209	QR BE DE FE
4214	105	EYR&R
4217	163	T C666 BO ISJ
4218	94, 111	G2OR
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4234	112, 168	QNUYR DG
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4236	213, 227	L C666 BV IVJ DQ GQ ESWO 2-MN-
4237	58, 93	10R BZ ER DZ C01
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4242	165	RMMR
4243	59, 109	ZR BG DR DG CG &GH &GH
4244	136	T5N CN BHJ B B DR& ER
4245	133	T5NXNJ DR& ER& B-& AL6XTJ
4246	136	T5N CN BHJ BR& BRE DR& ER
4247	136	T5N CN BHJ B1RE B1RE DR& ER &QH
4248	63, 227	WSQR CZ F- 2
4249	64	WSQO2M2OSWO &-KA- &QH
4250	142, 185	T6MV DMVTJ
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4262	116, 208	L6TJ AR DQ CG
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4265	206	1U2R CQ F- 2
4266	105	L6TJ-/G 6
4297	191	L55 A CUTJ FCN GCN
4298	32, 195	NCYQ2S1
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4300	97, 241	10R BMVMR
4302	29, 34	VHX1Q
4303	177	1R D1U1VR
4304	182, 223	RV1S1R
4305	139	T66 BVNNJ CR& E
4306	141, 173	T56 BNVVJ C1VR
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4307	62, 197	1N1&R D- 2YR DNW
4308	181, 201	WNR DV1U1R
4309	61, 178	1N1&R D1U1VR
4310	55	1N1&R D- 2YR D
4311	55	1N1&R D- 2YR
4312	59, 109	1N1&R D- 2YR DG
4313	151	T56 BN0NJ BO
4315	61, 175	ZR DNU1R
4316	202, 228	WSG1U1R DNW
4317	27, 135	T5N CN AUTJ B13 C2Q
4318	27, 135	T5N CN AUTJ BAUA C2Q
4319	27, 135	T5N CN AUTJ B17 C2Q
4320	22, 183	QVR BVR DQ
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4321	24	L C555 A DUTJ IQ J1Q I/J
4322	22, 119	QVR BQ EE
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4323	100, 126	T3OTJ B10R BG DG EG
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4324	134, 241	T55 BMVM FMVMJ
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4331	96, 219	1X&&1X&&R X020R &E
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4333	23, 96 219	OV1K&&2020R DX&&1X
4334	31, 98 217	Q2K&1R&2020R XX&&1X &G
4335	229	SUYS1&MR
4336	60, 150	T6N CN ENJ BZ DZ FR
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4338	60, 149	T6N CN ENJ BM1 DM1 F
4339	69, 150 224	T6N CN ENJ BZ DZ FS1
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4342	181, 210	QR BQ DQ EV1
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4345	94, 156	T3OTJ B1O 2 DR BX EX
4346	63, 208	1Y&R DQ CX E1N1&1
4347	218	AUAUAK &AUAK &G &G A-TOTAL C18
4348	218	14K14 &G &122
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4351	218	14K &G &132
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4358	95, 179	L5YVYTJ AU1R DO1& CU1R DO1
4359	141, 169	T56 BNVJ C8
4360	68, 174 183	1N1&R DNUYR&VR
4361	62, 197	WNR CNW DM2
4362	66, 99 195	NC1MR BO1
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4364	162, 199	T56 BO DO CHJ G1U1R BNW DNW
4365	84, 166	1Y&OVMMR
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4369	66, 100 203	WNR CNW DMR BO1
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4373	76, 110	GR CG DMVOY
4374	87, 125	GR CG BNZVOY
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4375	76, 110	GR B CMVOY
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4377	114, 179	L56 BV DV CHJ CV2 XG XG
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4380	112, 162	T8O CO EO GOTJ
4381	126, 209	QR BG DG FG C- 21
4382	126, 209	QR BG DG F- 2YXGGG
4383	94, 111	10R BG DG F- 2YXCGG
4384	140, 169	T56 BNVVJ C2
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4386	164	1Y2VMMR
4387	140, 173	T56 BNVVJ CR CNW
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4388	164	RMMV1R
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4391	46, 197	WNR DVM3
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4393	46, 197	WNR DVM1
4394	46, 197	WNR DVNY&&Y
4395	46, 197	WNR DVN3&3
4396	165	RVMMVR
4397	51, 152	T6N DOTJ AVR CNW
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4398	46, 197	WNR CVM1Y
4399	151, 209	T6N DOTJ A1R BQ
4400	46, 196	L6TJ AMVR CNW
4401	46, 197	WNR CVNY&&Y
4402	142, 206	T6N DNTJ ANO DNO
4403	46, 196	WNR DVM1R
4404	85, 198	WNR DVOR DNW
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4407	88, 183	NC2XV1&VO1&2CN
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4408	151, 187	T5NOVYJ DU2U1R& E
4409	164	RMMVVMMR
4410	181, 193	NC2XVR&2CN
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4419	47, 197	WNR CNW DMV2
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4422	96, 198	WNR CNW DOR D BNW
4423	193, 210	I66J B2CN CQ
4424	175, 210	QR BNU1R
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4426	96, 198	L66J B- G-/OR BNW DNW 2
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4464	31, 120 215	GR BYQPO&O2&O2
4465	47, 80 208	ZVR BO 2-CU-
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4467	135, 241	T5MVMJ DR& ER
4468	31, 120 144	T6NJ B1YQXGGG
4469	33, 52 130, 214	QR BVMYQXGGG
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4471	117, 154 231	T5MVYSYJ CU1R CG DG& EUS
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4474	27, 91	Q20R BR
4475	32, 102 183	Q20R DVR
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4481	68, 195 212	QR DR& B1N2CN&2CN
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4483	181, 217	RVYVRE1X&&1K1R &G
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4529	229	L66J CMYUS&H &ZH
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4533	237	SUYZM12
4536	54	Z14
4537	240	1N16YUS&S 2
4538	206	QR D4
4539	206	QR B4
4540	18, 90	QV10R B1U3
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4542	177	L5VTJ BR& ER
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4550	104	MUYZM18 &.H2-S-04
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4554	154, 234	T6NN DSJ CSH FR
4555	104	MUYZMR D- 2 &.H2-S-04
4556	191	NCXR&R&3CN
4557	174, 194	L5YTJ AUM BR& BR& ECN
4558	155, 167	T5N CSJ BQ E
4559	128, 136 165	T6NJ BG DVMZ
4560	101, 126 203	WNR CNW DOR DG
4561	101, 126 203	WNR CNW DOR DE
4562	65, 99 123	ZR CG DOR DG &GH
4563	151, 165 226	T56 BN DOJ CMNU1R DSW2
4564	58, 93	ZR DO6 &WSQR
4565	206	L66J BQ &WNR CNW ENW
4566	166	L66J &WNR CNW ENW
4567	36	1Y&VMY
4568	35	1XMV1U1
4569	38	1Y&MVYU1
4570	25, 39	QY&VMX
4571	38	1Y&VMX
4572	40, 81	1X&&EMVYOV1
4573	38	L6TJ AMVY
4574	36	1X&&1XMV1U1
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4576	38	1Y&VMX&&1X
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4580	25, 40	L55 ATJ A A B CMV2Q
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4649	196	WNR CNW ENW &QH
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4655	206	1R C D1R XQ X X1 2 ER B D
4656	207	1P. C D1R BQ EY C1 2 ER B D
4657	116, 209	QR DG BE F- 2YXGGG
4658	46, 196	WNR DVM4
4659	46, 196	WNR DVMY2
4660	46, 197	WNR DVM1Y
4661	116, 209	L6TJ A- A-/R DQ CG EG 2
4662	88, 159	T50IJ B10VR DNW
	203	
4663	46, 197	WNR DVM5
4664	88, 144	T6NJ B20VR CNW
	203	
4665	240	2NR&VN2&R
4666	46, 197	WNR DVN1Y&&1Y
4667	62, 206	ONR DN1&1
4668	46, 196	WNR DVN1R&1R
4669	66, 100	WNR CNW DO2N1R&1R
	203	
4670	77, 198	WNR CMVOY
4671	75, 93	1Y&OVMR C01
4672	74	1Y&OVMR B C
4673	74	1Y&OVMR B D
4674	74	1Y&OVMR B E
4675	74	1Y&OVMR B F
4676	74	1Y&OVMR C E
4677	40, 82	15VM2OV1
4678	18, 39	QV7Y9&MV1
4679	75, 93	1Y&OVMR B01 D- 2
4680	50, 122	WNR DVMR EG
	202	
4681	65, 99	G 5-R FO2N2&2
	123	
4682	144, 234	T6 NJ AO BSH
4686	44, 109	GR DG BMV2
4687	76, 110	GR BG CMVOY
4688	75, 110	GR D CMVOY &GR B CMVOY
4689	49, 72	GR CG DVMR DNUNR
	121	
4690	127, 213	QR DG BSR EQ EG
	224	
4697	245	QR DG B1R EQ EG
4698	245	QR DG B1R BQ EG
4699	245	QR BG DG EG F- 21
4700	245	NO STRUCTURE
4704	147, 241	T66 BMVMVJ
4705	132, 164	T66 BNBMVJ
4706	237	SUYMRE&M12

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4707	236	12MYUS&M12
4709	27, 91	Q20R D- 2X
4710	15, 157	T56 BVOV GUTJ
4711	34	IUY&1O 2YY
4712	79	1Y&OVOR COVOY
4713	79	1Y&OVOR BOVOY
4714	231	SUYO4&S1VO & 2-CA-
4715	85, 224	20V2S2V02
4716	85, 224	40V2S2V04
4717	85, 224	6Y&OV2 2S
4718	96, 217	1X&&1X&&R DO2O2K1R &SCN
4719	69, 102 143, 220	T56 BK DHJ B C1U1MR B01 DO1& D D &G
4720	164	ZMV4VMZ
4721	69, 150 162	T6N CN ENJ BZ DZ F- BT5QJ
4722	36	1U1VMR
4723	153	T5N CO AUTJ B11 D
4724	68, 195 212	L66J B1N2CN&2CN CQ
4725	153	T5N CO AUTJ B8U9
4726	153	T5VNVTJ BX1OV8U9
4727	153	T5N COTJ B8U3U6 D
4728	153	T5N CO AUTJ B8U9 D
4729	153	T5N CO AUTJ B17 D
4730	84, 149 171	T5N CO AUTJ B8U2U7 D
4731	84, 140 171	T56 BVNVJ C2OV8U9
4732	84, 140 171	T56 BVNVJ C2OV17
4733	59, 137	T6N CN ENJ BZ DZ FMR
4734	60, 150	T6N CN ENJ BZ DZ F- AT6NTJ
4735	60, 150	T6N CN ENJ BZ DZ FY
4736	60, 150	T6N CN ENJ BZ DZ F- CL6UTJ
4737	60, 149	T6N CN ENJ BM1 DM1 FR
4738	59, 127	T6N CN ENJ BZ DZ FN1YU1&1YU1
4739	60, 150	T6N CN ENJ BZ DZ F- 2 BR
4740	69, 143 163, 220	T56 BN DSJ B GM1U1- CT56 BK DHJ B D D &G
4741	143, 220	T56 BNJ C B1U1- CT56 BK DHJ B D D &G
4742	67, 124 143, 220	T56 BK DHJ B C1U1R DN1&2G D D &G
4743	67, 124 217	L6Y DYJ AUYR DN1&1R DG& DUK &G
4744	67, 124 143, 220	T56 BK DHJ B C1U1R B DN2&2G D D &G
4745	59, 109	L6Y DYJ AUYR BG&R C DM2& C DUN2 &GH
4746	143, 220	T56 BK DHJ B D D C1U1- DT56 BNJ B CR

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4747	50, 122	WNR DMVR DG
	202	
4748	97, 238	MUYZS2OR DX6&1X &EH
4749	30, 78	GY&XGGYQMVO4
	120	
4750	97, 135	T5N CN AUTJ BS2O 22
	238	
4751	23, 72	T5NNV DHJ BR BSWQ& DNUNR BSWQ& EVQ
	143, 227	
4752	33, 70	T6N CN ENJ BZ DMYQXGGG FR
	130, 133	
4753	88, 125	G1VOR D- 2S
	223	
4754	62, 197	WNR CNW DM2U1
4755	36	L6TJ AMV3
4756	17, 39	QVR BMV3
4757	164, 200	L5YTJ AUNMVR DNW
4758	42, 92	3VMR DO2
4759	164, 200	L6YTJ AUNMVR DNW
4760	164, 200	WNR DVNU1Y2&2
4761	166, 200	WNR CNW DMNUY5
4762	49, 99	WNR BMVR DO1
	202	
4763	156, 164	T56 BO DO CHJ G1UNMVR DNW
	204	
4764	164, 200	WNR DVNUY1
4765	95, 198	WNR CNW DOR BO1 D2U1
4766	95, 198	WNR CNW DO 2 DR
4767	96, 198	WNR CNW DOR ER
4768	96, 198	WNR CNW DOR DR
4769	96, 198	L6TJ AR CNW ENW BOR BNW DNW
4770	62, 197	WNR CNW DM1R&1R
4771	50, 122	WNR CMVR BG
	202	
4772	50, 122	WNR DMVR BG
	202	
4773	43, 108	GR DVMR BG
4774	43, 108	GR DVMR CG
4775	42, 107	L6TJ AMVR BG
4776	42, 107	L6TJ AMVR DG
4777	127, 204	WNR BQ EG C- 2YXGGG
	213	
4778	42, 107	GR BVM1R
4779	42, 107	GR DVM1R
4780	43, 107	GR DVMY3
4781	43, 107	GR DVN3&3
4782	49, 98	GR DG BMVR DO1
	121	

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4783	49, 98 121	GR BMVR D01
4784	49, 98 121	GR CMVR D01
4785	49, 98 121	GR DMVR D01
4786	101, 126 203	WNR CNW DOR BG DX
4787	35	1XMV1U1
4788	38	L6TJ AMVY
4791	25, 40	QY&VMX
4792	25, 40	Q2VMX3&2&2
4793	25, 40	QYVMA
4794	67, 123 150	T6N CN ENJ BG DG FR BG
4796	53	ZR X4
4797	53	ZR X4 X4
4798	41, 92	ZVR Z2 Z2
4799	182, 225	L55 A CVTJ A A B DSWM4
4800	25, 57	ZR D2Q &ZR B2Q EGH EGH
4801	94, 162	T6O BUTJ D F01Y
4802	35	1VM2U1
4803	17, 39	QVYU1&MV1 &ZH
4804	40, 57	L6TJ AM1VZ
4805	44, 151	T6N DOTJ AV3
4807	44, 152	T6N DOTJ AV5
4808	58, 109	GR BM2U1
4809	117, 226	G2SWX
4810	40, 57	Z2MV8VM2Z
4811	136, 169	T5VNvj B4
4812	25, 57	Q2N4&R
4813	30, 65 120	QY&1NR BG&1YQ
4814	6, 208	MMR DQ CX
4815	80	2U1VO 24
4816	40, 81	1VO3YOV1&1MV1
4817	45, 139 171	T56 BVMVJ GMV1
4818	61, 139 171	T56 BVMVJ FZ
4819	26, 57	QY&1NR&1YQ
4820	26, 57	L66J BN1YQ1Q1YQ1Q
4821	82, 111	1UYG1OV 24
4822	36	1U1VM1
4824	61, 148 171	T5VNVTJ BR6 DMR
4825	36	1U1VM 21
4826	191	NCYCNEU1R

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4827	45, 132 171	T56 BVNVJ C: MV1U1
4828	40, 81	2OVYVO2&MV1
4829	85, 192	NCXCN&OV1
4830	35	L6TJ AMV1U1
4831	81	2OVYU2&VO2
4832	85, 192	NCXOV1
4833	228	SUY&N1&1
4834	228	SUYM1
4835	117, 226	GR DSWR DG
4836	55	R1M2M1R
4837	40, 57	1Y1MR BMV1
4838	48, 65 98	1VMR BZ D01
4839	18, 56	L66J CZ DVQ &GH
4840	45, 178	1VMR CV1
4841	40, 81	1VO1XMV1
4842	84, 192	2OVYCN&U1R
4843	83, 160	T5OJ BVO1
4844	83, 159	T5OJ BVO4
4845	87, 125 160	T5OTJ BVO1 CG DG EG
4846	87, 125 160	T5OTJ BVO4 CG EG EG
4847	87, 125 160	T5OTJ BVO3 CG EG EG
4848	82, 160	T5CJ BVO3
4850	191	NC8CN
4851	115, 192	NC1R BG DG FG
4852	84, 192	2OVYCN&U1R
4853	46, 147 191	T66 BN CHJ EVR& CCN
4854	152, 193	T6N DOTJ AYCNE 1CN
4855	194, 222	1VMR DSWNCN & 2-CA-
4856	62, 192	QR-/G 5 &NC2MY
4857	32, 195 223	NCYQ2S1
4858	46, 191	ZV1CN
4859	87, 125 160	T5OTJ BVO2 CG EG EG
4860	83, 159	T5OJ BVO2
4861	139, 169	T56 BVNVJ C4
4862	155, 180 186	T50VT CV1
4863	157, 167 213	T66 BOT&J CR CQ DQ& DQ GQ IQ
4864	207	L5TJ AR BQ
4865	207	L5TJ AR DQ

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4866	158, 167 184, 214	T66 BO EVTEJ CR CQ DQE GQ IQ
4867	23	L B556 A 1E K BXTJ C G G IQ I
4868	93, 111	GR BG DG EO1
4869	116, 209	QR BG CG EG FG
4870	115, 208	QR BG XG X2U2
4871	94, 111	GR BG DG EG CO4
4872	35	1XMV1 & .H-YT-E3
4873	77, 157	T5CJ B1MVOY
4874	77, 192	NCYOVMR
4875	75, 93	1Y&OVMR B01 D01
4876	115, 198	WNR BG CG EG FG
4877	101, 126 203	WNR-/G 4 D01
4878	88, 125 103	WNR-/G 4 DOV1
4879	76, 110	G2OVMR CG
4880	78, 100 124	1Y&OVMR CG F01
4881	128, 164 233	SHR BVMNU1R BG DG
4882	164, 224	ZMVR BS 2 &GH &GH
4883	128, 164 224	GR CG D1UNMVR BS 2
4884	84, 179	L5VVTJ CVO2 EVO2
4885	126, 215	QPQO&1R BG DG
4886	127, 215	QPQO&1R CG EG
4887	126, 215	GR CG D1PO&O2&O2
4888	114, 179	L6V BUTJ-/G 8
4889	69, 205 213	WNR CNW DMR DQ
4890	181, 193	NC2 3XVR
4891	151, 187	T5NOVIJ DU1R& E
4892	73	20VNR&R
4893	58, 93	1Y&R X XY& X02N1R&1R
4894	58, 93	1Y&R X XY& X02N1R&1R
4895	32, 69 205	WNR CNW DM2Q
4896	74, 146	T5NTJ AVOY
4897	101, 204 213	WNY&U1R DQ CO1
4898	84, 166	1Y&OVMN1&R
4899	77, 144	T6NJ BMVOY D F
4900	75, 82	RMVOYVO1R
4901	54	2Y&MR DR DMY2
4902	43, 107	GR CG DVM1Y
4903	88, 125 203	WNR BOVR BG DG

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4904	50, 122 202	WNR CMVR BG DG
4905	43, 108	GR CG DVMR BG
4906	43, 108	GR CG DVMR CG
4907	43, 108	GR CG DVMR DG
4908	43, 108	GR CG DVMR C
4909	43, 108	GR BG DVMR C
4910	43, 108	GR CG DVMR D
4911	49, 98 122	GR BG DVMR D01
4912	49, 98 121	GR CMV10R-/G 5
4913	76, 110	G20VMR BG EG
4914	87, 125 166	G20VMMR
4915	78, 124 195	NCR CMVO2G
4916	76, 110	G20VMR CG F
4917	76, 110	G20VMR C
4918	78, 86 124	G20VYOVMR
4919	43, 107	GR CG DVMY3
4920	78, 100 124	GR CG DO20VMR
4921	21, 164	ZMVY4EVQ
4925	66, 123 150	T6N CN ENJ BZ DZ FG
4926	133, 184	T7MVTJ
4927	32, 69 196	Q2NR&2CN & 2 E.H2-S-04
4928	85, 192	2U1YCN&OV1
4929	157, 185	T40VTJ D4
4930	42, 107	G1VM16
4931	143, 185	T6NMV EUTJ
4932	33, 130 205, 225	WNR BG ENW CSWM2Q
4933	19, 106	QVR CG FVQ
4934	40, 81	20V1VMX&& 24
4935	33, 70 103, 130	G1YQ1MR B01
4936	84, 143 185	T5NMV DHJ EVO2
4937	47, 207	L66J CQ DVM- AL6TJ
4938	21, 194	QV1X1CN
4939	48, 65 121	ZV1MR CE
4940	48, 65 98	ZV1MR C F01

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4941	48, 65 121	ZV1MR CG
4942	64, 241	L6TJ AM1MVZ
4943	151	RNU1R
4944	164, 200	WNR DVMNU1
4945	164, 200	WNR DVMNU1
4946	164, 200	WNR DVMNU4
4947	164, 200	WNR DVMNUYR
4948	114, 179	L6V BUTJ-/G 8
4949	164, 200	WNR DVMNUY
4950	164, 200	WNR DVMNUY2
4951	156, 164 204	T56 BO DO CHJ G1UNMVR DNW
4952	164, 183 205	WNR DVMNUY1V1
4953	164, 200	WNR DVMNU3
4954	164, 200	L5YTJ AUNMVR DNW
4955	164, 200	L6YTJ AUNMVR DNW
4956	127, 164 204	WNR DVMNU1R BG
4957	164, 200	WNR DVMNU2U1R
4958	164, 200	WNR DVMNU1Y2&2
4959	127, 164 204	WNR DVMNU1XGGG
4960	164	1YUNMVR
4961	164	1YR&UNMVR
4962	164	RVMNU2U1R
4963	156, 164	T56 BO DO CHJ G1UNMVR
4964	83, 159	T5OJ EVOY
4965	22, 119 160	T5OJ BVQ EE
4966	22, 119 160	T5OJ BVQ EG
4967	88, 160 203	T5OJ BVO2 ENW
4968	127, 158 204	T5OJ BNW EG
4969	83, 159	T5OJ BVO6
4970	83, 159	T5OJ BVO2Y
4971	83, 160	T5OJ BVO8
4972	83, 159	T5OJ BVO10
4973	83, 159	T5OJ BVO2U1
4974	44, 158	T5OJ EVZ
4975	165	ZMR &GH
4976	166, 200	WNR CNW DMNUY&1UY
4977	83, 159	WNR CNW DO1R
4978	96, 198	L6TJ AOR BNW DNW
4979	101, 158 203	T5OTJ B1OR BNW DNW

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4980	95, 198	WNR CNW DOR B01 D2U1
4981	175, 210	QR BNU1R
4982	174, 210	QR BNU1R BQ
4983	127, 175 213	QR BNU1R BG 213
4984	101, 175 213	QR B1VU1R D01 213
4985	127, 175 213	QR BNU1R DG 213
4986	32, 51 205	WNR DVM2Q 205
4987	41, 91	2MVR D01
4988	41, 91	10R DVM1
4989	41, 91	3MVR D01
4990	41, 91	1Y1MVR D01
4991	42, 92 142	T6NTJ AVR D01 142
4992	49, 98 121	GR BMVR D01 121
4993	49, 98 121	GR CMVR D01 121
4994	49, 98 121	GR DMVR D01 121
4995	49, 98 121	GR DG BMVR D01 121
4996	49, 99 202	WNR BMVR D01 202
4997	41, 91	1Y1MVR D01
4998	49, 99 202	WNR DMVR D01 202
4999	41, 91	1U2MVR D01
5000	94, 164	10R DVMMR
5001	42, 92	10R DVMR C
5002	42, 92	10R DVMR B
5003	42, 92	10R DVMR D
5004	52, 129 155	T5N CSJ BMVX 155
5005	41, 91	10R DVMR D01
5006	42, 92	10R DVMR E01
5007	156, 185	T50VTJ CR BR
5008	79	18OVO18
5009	27, 107	GXGGYQXGGG
5010	22, 97 119	QV10R BG CG EG FG 119
5011	38	1XVMR
5012	21, 145 241	T6MVMVJ EVQ 241
5013	77, 198	WNX10VMR
5014	77, 152	T6N DOTJ A20VMR

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5015	51, 104 195	NCMYUM&MV1
5016	74	1UY10VMR
5017	26, 75	. 'O1YQ
5018	26, 75	Q20VM2Q
5019	26, 75	Q20VN2Q2Q
5020	77, 152	T6 N DOTJ AVOY
5021	26, 75	Q20VM 22
5022	26, 75	Q20VM2Y
5023	74	1UU20VMR
5024	77, 192	NC20VMR
5025	38	1UYVMR
5026	77, 192	NCX0VMR
5027	26, 75	Q20VM12
5028	152	T B656 HKJ H-& AT6K DOTJ
5029	45, 174	L B656 HYJ EMV1 HUNR
5030	26, 75	Q20VM18
5031	45, 174	L B656 HHJ ENU1R DMV1
5032	175, 201	L B656 HYJ ENW KNW HUN 2 DR
5033	149	T D585 A D- BN DN GN INTJ
5034	174	L B656 HUJ HUNR
5035	225	1R DSWMR D
5036	89, 145 239	T6MYMVJ BUS EVO2
5037	77, 110	G1Y1GOVMR CG
5038	175, 201	L B656 HYJ ENW HUN 2 DR
5039	49, 98 121	ER DMVR DO1
5040	51, 127 225	ZSWR DMVXGGG
5041	40, 81	1VOR DMV1
5042	35	2NR&V1
5043	38	2VN2&R
5044	38	4NR&V2
5045	154, 223	T56 BN DSJ CS3U1
5046	85, 226	1VOR DSWR DOV1
5047	46, 196	WNR CMV1
5048	42, 107	GR DR DMV1
5049	42, 107	GR DR BNV1&V1
5050	40, 72	1VMR DNUNR
5051	40, 72	1VMR B DNUNR B
5052	47, 221	L C666 BV IVJ EMV1
5053	44, 109	GR DMV2
5054	44, 109	GR BMV2
5055	44, 109	GR CMV2
5056	44, 109	GR DG BMV2
5057	47, 197	WNR CMV2
5058	47, 197	WNR BMV2
5059	46, 196	WNR CNW DMV2

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5060	37	3VN16R
5061	37	3VN2&R
5062	37	4NR&V3
5063	37	5NR&V3
5064	36	4MV3
5065	44, 108	GR CMV3
5066	44, 108	GR BMV3
5067	44, 108	GR DNV3
5068	47, 197	WNR CMV3
5069	47, 197	WNR DMV3
5070	44, 108	GR DG BMV3
5071	37	3VMR C
5072	37	3VMR B
5073	42, 92	3VMR BO1
5074	37	3VMR D
5075	101, 126 195	NC10R BG DG
5076	142, 193	T6NTJ ACN
5077	132, 193	T3NTJ A2CN
5079	166, 193	ZNUY2&YCN&1UNZ
5080	101, 126 195	NC20R BG
5081	95, 192	NC20R X9
5082	95, 192	NC20R D
5083	194, 215	NC2PO&O1&O1
5084	194, 215	QPQO&1X6&6&CN
5086	115, 193	NCYG
5087	66, 99 195	NC2MR BO1
5088	66, 99 195	NC2MR BO2
5089	129, 196 226	NC2NR&SWR BG D
5090	62, 192	NC2MR
5091	67, 124 195	NC2MR CG
5092	67, 124 195	NC2MR BG
5093	62, 192	NC2MR B2
5094	62, 192	NC2N16R
5096	62, 192	NC2N2&R
5097	194, 234	NC2SR D
5100	115, 193	NCXGG1G
5101	62, 191	NC1N2&2
5102	95, 192	NCY2&OR
5103	30, 64 119	Q2MR BG
5104	37	2U1VM2U1

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5105	30, 64 119	Q2MR CG
5106	84, 179	1V1VO2U1
5107	159	T5OIJ B B D D
5108	84, 148 171	T5VNVTJ B2OV1
5109	40, 57	9U8VM3N2&2
5110	81	2OVYU2&VO2
5111	29, 64 119	QY&1NR BG&1YQ
5112	155, 242	STRUCTURE UNKNOWN
5113	136, 169	T5VNVTJ B4
5114	35	1VM2U1
5115	36	1U1VM1
5116	85, 192	NCXCN&OV1
5117	23, 69 102, 233	QVYSHR BZ EO2
5118	139, 209	T5NN BUTJ AR& CR DQ& ER
5119	45, 155	T5N CSJ BMV1 D
5120	30, 65 119	Q2MR BG EG
5121	149, 170	T5VNVTJ B1U1
5122	60, 151	T5MN DM EHJ CZ &WNR CNW ENW
5123	97, 154 238	T56 BN DSJ CZ F01 G01
5124	164	ZMVVMZ
5126	32, 51 205	WNR DVM2Q
5127	45, 155	T5N CSJ BMV1 E
5128	25, 57	L66J BM2Q C
5129	29, 48 119	Q2N12&V1G
5130	48, 226	1VMR B E- 2SW
5131	53	Z12 &WSQR D
5132	51, 155 203	T5N CSJ BMV1 DNW E
5133	35	L55 ATJ A A B CMV1U1
5134	25, 39	Q2MV1VM2Q
5135	191	NCYCN&U1R
5136	17, 39	QV1U1VM1
5138	117, 230	SUYGN2&2
5139	155, 231	T5NN DSJ C- E-/SYUS&N2&2 2
5140	85, 230	2CV1SYUS&N2&2
5141	85, 230	4OV1SYUS&N1&1
5142	85, 229	4N4&YUS&S1VO2
5143	85, 230	2OV1SYUS&N1&1
5144	88, 126 230	GR DOV1SYUS&N2&2

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5146	88, 125 223	G 5-R FS1VO1
5147	51, 127 223	G 5-R FS1VM4
5148	237	SUYMRCM18
5149	236	12MYUS&M2U1
5150	236	18MYUS&M2U1
5151	135	T5M CN BUTJ B11
5152	59, 134	T5N CN AUTJ E17 C2Z
5153	54, 73	14M 4B &C
5154	25, 56	QY2&2M14
5155	25, 56	QY2M14 &QV2 &QH
5156	76, 110	GR CG EMVOY
5161	160, 180 187	T50VIJ D2V1 E E
5162	87, 125 160	T50TJ BV08 BG CG DG EG
5163	18, 91	QVYO1R
5164	161	T56 A CO GUTJ D D H
5165	161	T C364 A DOTJ A A C
5166	24	I46 A EUTJ A A E GQ
5167	58, 82	ZY2&UY2ZVO1
5168	16	L4TJ A1VQ P B C1VQ
5169	21, 160 187	T50VIJ D4VQ E E
5170	117, 231	GR BG DG EG COVS2U1
5171	40, 82	2CVVMR
5172	151, 242	T5MNNNJ EMVZ
5173	48, 79	ZMVMMVZ
5174	77, 149	T5MNNNJ EMVO2
5175	151, 199	T56 BN0Nj EO H INW
5176	77, 144	T6NJ BMVOY C
5177	77, 144	T6NJ BMVOY D
5178	77, 144	T6NJ BMVOY E
5179	77, 144	T6NJ EMVOY F
5180	79, 202	WNR CNW DOVO2U1
5181	77, 159	T5CJ B10VMR
5182	73	1UU1X0VMR
5183	75, 82	Z0VX0VMR
5184	75, 82	40V20VMR
5185	74	RMVO2R
5186	78, 89 195	NCR CMVOYVO4
5187	21, 72	L4TJ B B C1VQ AY&UN 2
5188	26, 75	QY10VM16 &Q1Y0VM16
5189	74	RMVOX&E1 2UU
5190	59, 134	T5NN DMJ CZ EZ & 2QVVQ

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5192	104,134	T5MNNNJ EMYZUM
5193	115,198	WR-/G 5
5194	115,198	WNR BG CG DG EG
5195	78,129 144	T6NJ BMVOY EG
5196	115,208	L B666J XQ XG
5197	245	T56 BO DO CHJ G1U2
5201	87,100 124	GR DOVR B02
5202	87,125 162	T56 BO DO CHJ G1OVR DG
5203	82,111	ER DOVR
5204	80	L66J BOVR
5205	82, 93	1U2R CO1 DOVR
5206	82,111	5V01R CG DG
5207	87,100 125	E1V0303OR
5208	82,111	G2OV9U1
5209	82,111	L6TJ AOVVR BG
5210	80	L6TJ AOV9U1
5211	158	T6O COTJ B9 D3 E2
5212	158	T6O COTJ B9 D D F
5213	119,233	SHR-/G 5
5214	176	L50J 0- 2-FE-
5215	83,159	T50J BVO2
5216	24	1Y&1XQ&1 2UU
5217	24	QX2&&1UU1XQ2
5218	80	17V01U1
5219	24	QX&&1UU1XQ
5220	177	L46 A EV FUTJ A A G
5221	97,211	2U1R DQ CO1 E01
5222	207	QR BQ D1Y& 2
5223	34	L5UTJ A D1VH E E
5224	24	L6UTJ A DXQ FQ
5225	24	L6UTJ A DXQ FQ
5226	24	L6UTJ A DXQ FQ
5227	24	QX3&&1UU1XQ3
5228	117,228	GR DSWOR DG
5229	117,228	GR DSWOR BG
5230	117,228	GR DSWOR DE
5231	27,106	Q1R BG DG
5232	27,106	Q1R CG DG
5233	103,131 184,214	G2VR DQ CO1
5234	102,129 183	EY&VR CO1 DO1
5235	215	L B656 HHJ HPO&01801
5236	215	1X&1Y&20 2PQO

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5238	74	20VMR BR
5239	137, 209	L66J CQ B1- AT6NTJ
5240	74, 142	T6NTJ AVOY
5241	37	L55 ATJ C C D1VZ
5242	74	1Y0VMR C1U1
5243	74, 142	T6NTJ AVOY E E2
5244	74	1Y&OVNR&2U1
5245	74	2U2NR&VOY
5246	74, 142	T6N DNTJ AVOY B DVOY E
5247	78, 89	4OVY&OVMR C F01
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5248	37	L55 ATJ C C D1VMR
5249	118, 238	MUY2S1R BG DG &GH
5250	154, 239	T5MYMY EHJ BUS EUS E E
5251	59, 143	T56 BM DN FN HNJ GN2&2 IN2&2
5253	53	L46 A EUTJ A A E GZ
5255	78, 100	G20VMR C F01
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5256	78, 100	GR CMVO20R BG DG
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5257	75, 109	1Y&OVMR BG D- 2
5258	23, 153	T5SYMV EHJ EUM E1VQ
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5259	140, 153	T56 BVNVJ C1- ATN DOTJ
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5260	61, 141	T56 BVNVJ C1MR C
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5261	66, 99	T56 BVNVJ C1MR DO2
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5263	61, 141	T56 BVNVJ C1MR B D
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5267	61, 141	T56 BVNVJ C1MR B E
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5268	66, 99	T56 BVNVJ C1MR DO1
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5271	210, 221	L6V DVJ BQ EQ

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5273	162, 167	T66 BOVJ D1R& E IQ
	187	
5274	95, 179	10R DVY2&U1R D01
5275	161, 187	T56 BVO DHJ D- D-/R BQ DQ FQ C 2
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5276	132, 182	T6MVMVVVJ
	242	
5277	222	ZVMNUY2
5278	222	L6YTJ AUNMVZ
5279	66, 100	WNR BZ EO2
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5280	132, 167	T6VMVMV FHJ FQ F- 20
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5281	62, 197	WNR CZ F ENW
5282	62, 197	ZR CZ D ENW
5283	39	1Y&MVVMY
5284	77, 144	T6NJ B20VMR
5285	39	RMVVMF
5286	75, 93	RO1YOVMR
5287	232	SCNR
5288	76, 110	G1U10VMR CG
5289	166, 216	2CPO&O2&MMR
5290	75, 109	GR CMVOY1G1U1
5291	77, 110	GXGGXOVMR CG
5292	75, 109	G1YG1GOVMR
5293	79, 103	NC2020VMR CG
	131, 195	
5294	78, 86	G2OVYOVMR CG
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5295	63, 227	ZR DMR DZ BSWQ
5296	76, 110	L56T&J FOVMR CG
5297	76, 110	L56T&J GOVMR CG
5298	78, 86	GR CMVOYVOR
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5300	89, 130	T5OJ BNW E1OVR DG
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5304	15, 106	T56 3VOVJ-/G 4
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5305	94, 158	T5OJ B1O2
5306	83, 159	T5CJ B1OV1
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5313	35, 158 205	T5QJ EVH ENW
5314	160, 180	T5QJ BV1
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5316	19, 159	T5QJ B1U1VQ
5317	158, 199	T5QJ BNW
5318	161, 180	T5QJ BVR
5319	83, 159	T5QJ BYOV1&OV1
5320	101, 158 203	T5QJ BNW E1O1
5321	48, 231	ZVMMYUS&MZ
5322	229, 231	ZMYUS&MMYZUS
5323	231	ZMYUS&MZ
5324	78, 212 221	L C666 BV IVJ DQ GMVO1
5325	143, 167	T6NNJ CQ D FQ
5326	42, 107	GR CMV1U1
5327	32, 69 137, 174	T5VNVJ A- AL6TJ CN2Q2Q
5328	38, 44 133	T3NTJ AV 23
5329	147, 185	T5NVTJ A1U1
5330	30, 65 211	Q2M1R BQ
5331	82, 93	2CVYVO2&102
5332	25, 57	Q2N2QR B E
5333	30, 65 119	Q2N2QR CG
5334	30, 65 120	G1YQ1N2&R C
5335	49, 86 194	2CVYCN&U1R DMV1
5336	48	ZVMV3VMVZ
5337	21, 226	QV3SW 23
5338	113, 139 172	T56 BNVVJ C2E
5339	15, 106 157	T C555 A AO EVOVTJ IG JG
5340	60, 151	T5NN DNJ C DZ E
5341	74	RMVO1 2X
5342	46, 178	1V1VM 22
5343	68, 88 127	GR CM1UYVO2&VO2

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5345	155, 239	T5SYNV EHJ BUN4 C4
5346	83, 146	T5NJ BVO2 C DVO2 E
5347	83, 144	T6NJ B CVO2 EVO2 F
5348	46, 178	1V1VM 2 CR D
5349	105	L66J C1G
5350	105	GXR&R&R DR
5351	20, 207	QR BVO-AG-
5352	16	L66J B3VQ E- AL5TJ
5353	71, 179	L66J CV2N1&1 &GH
5354	35	RMV1R
5357	217	16M1R &.H-P-F6
5359	235	MUYZS1R &.H-P-F6
5366	81	1U2OV 3/1Y1/
5367	158	T6O COTJ B- BT5OJ
5368	158	T5O COTJ B2 B D
5369	158	T6O COTJ B1U1R
5370	32, 89 128	QYR&VO2G
5371	112, 158	T5O COTJ BR DG& D
5372	112, 158	T5O COTJ BR EG& D
5373	80	5VO2UU1
5374	158	T6O COTJ E E B- BT6OTJ
5375	158	T6O COTJ C E B- BT6OTJ
5376	158	T6O COTJ D B- BT5OJ
5377	158	T6O COTJ B2 B D
5378	158	T5O COTJ D B- BT5OJ
5379	158	T5O COTJ D E B- BT5OJ
5380	158, 199	T6O COTJ B2 B ENW E
5381	37	VHMX
5382	112, 158	T5O COTJ BR BG& D E
5383	83, 162	T56 BC DO CHJ GY1R&OVH
5384	82, 93	RO2OV10R
5385	112, 158	T6O COTJ BR DG& D
5386	87, 125 160	T5OJ BVO8 BG CG DG EG
5387	29, 216	Q1 4P &G
5388	224	R1SS1R
5389	161, 167 184, 214	T66 BO EVJ CR DQ& GQ IQ
5390	34	VH1U1R
5391	28, 227	WSO&1Q &-NA-
5392	140, 169	T56 BNVVJ C- BL66J
5393	61, 178	ZR DVR DZ
5394	132, 173 209	T C555 A DVNV IUTJ ER DQ
5395	154, 219	T56 BK DSJ B C &WSO&01

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5397	161	T36 BOTJ A EYU1
5398	177	L46 A EVTJ A A G
5399	177	L46 A EVTJ A A G
5400	177	L46 A EVTJ A A G
5401	16	L5UTJ A D1VQ E E
5402	20, 178	QV8UU2V6
5403	20, 178	QV7V1U1V6
5404	22, 161 182	T3OTJ BV7VQ CV6
5405	20, 178	QV8U2V6
5406	20, 178	QV9U1V6
5407	20, 178	QV7V2V6
5408	22, 161 182	T3OTJ BV6 C8VQ
5409	22, 32 183	QV7VYQYQV6
5410	102, 128 228	GR DOSWR DO1
5411	152, 193	T6N DOTJ A2CN
5412	63, 208	ZR CQ EQ
5413	152	T6N DOTJ A- 24
5414	61, 178	T B656 HVJ EM1
5415	151, 180	T6N DOTJ A- 2 B EL6V DVTJ
5416	45, 178	L B656 HVJ EMV1
5417	83, 153	T6N DOTJ AXVO2&1VO2&1VO2
5418	83, 152	T6N DOTJ AYVO4&1VO4
5419	85, 218	1VO2K&E 25 &I &I
5420	28, 217	Q2K&E 10K2Q &E &E
5421	83, 153	T6N DOTJ AXVO2U1&/1VO2U1 2
5422	46, 178	L B656 HVJ EMVR
5423	28, 217	Q2K&2Q& 210 &E &E
5424	141, 173 180	L B656 HVJ E- CT56 BVNVJ
5425	38	L6TJ ~MV 28
5426	42, 92	1OR BO1 D2MV 28
5427	38	L6TJ A- 2NV 28
5428	55	1N1&2 2U
5429	68, 149 195	T6N CN ENJ BZ DZ F2 2XR&CN
5430	101, 126 134, 239	T5M CN BUTJ BS. ~2G &GH
5431	97, 135 238	T5N CN AUTJ BS1O1 C1O1
5432	70, 130 214, 223	1N1&1R BQ CSR BQ EG C1N1&1
5433	182, 225	L Bo56 HVJ EN1&SWR D

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5437	19, 106	QVYGU1G
5438	82, 111	1U2OVYG 2U
5439	" , 111	GR BG DG EOVO1
5440	38	L6TJ AMVY
5441	44, 108	GR CMVXFFXFFF
5442	118, 232	SCNR CG
5443	73	10VM 2 CR
5444	88, 126 230	E20VYUSEM 22
5445	21, 229	QV1SYUS&N2&2
5446	241	L6TJ AMVM1Y4&2
5447	241	1N1&VM 2 CR
5448	237	SUYZM 2 DR
5449	236	L6TJ AMYUS&M2
5450	235	MUYZS2 2U &EH &EH
5451	118, 238	MUYZS1R DG &EH
5452	48, 240	1VM2MYUSES 2
5453	113, 137 172	T5VNVJ BR& DG EG
5454	23, 33 134, 239	T5M CN BUTJ BSYQVQ EGH
5455	134, 231 239	T5MYNTJ BUS CYUS&S1
5456	48, 155 231	T5NYSTJ AVM2 BUS
5457	154, 231	T5SYNV EHJ C- 26
5458	128, 154 233	T56 BN DSJ CSH HG
5459	76, 110	GR CMVO2U1
5460	77, 110	G1Y0VMR C
5461	58, 75	ZR CMVOY
5462	76, 110	GR BMVOY
5463	77, 198	WNR DMVOY
5464	76, 110	GR CN1&VOY
5465	77, 110	G1Y0VMR CG
5466	73	2U2OVMR
5467	75, 109	GYU2OVMR
5468	58, 75	2N2&20VMR
5469	74	4Y2&10VMR
5474	30, 78 120	GXGGYQMVOY
5475	73	1MVOR
5476	76, 109	GR DOVM2
5477	77, 198	WNR DOVM2
5478	74	ROVMR
5479	76, 109	GR DOVN1&1
5480	73	3N3&VOR

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5483	40, 82	2OVVMR
5484	84, 166	1YOVMMR
5485	21, 48 119	QV1U1VMR CG
5486	118, 239	SUYZMR CG
5487	23	Q2U1R
5488	163, 231	T5SYSTJ BUS
5490	105	GX&&2XG
5491	24	1Y&XQYG&1 2UU
5492	18, 91	QV1U1R D01
5493	24	QXR&R&R DR
5494	28, 178	QXV1
5495	24	QX2&2&1UU1
5496	159, 180	T5O CVTJ B B E E
5497	34	VHYU1R
5498	16	QVYU1R
5499	24	QX&&1UU 22
5500	24	QX2&&2YU2
5501	24	QX2&&1U1XQ2
5502	18, 91	QVYU1R B01
5503	24	QX7&1UU1
5504	24	QXR&&1UUXQR
5505	24	QX6&&1UU1XQ6
5506	24	QX7&&1UU1XQ7
5507	24	QX9&&1UU1XQ9
5508	21, 231	QV1S 2YUS
5509	82, 111	2OVYGU1OVR
5510	69, 175 222	L66 BV EYJ CZ EUM &GH
5511	18, 39	QV1MV1R
5512	71	ON1&1&1 &QH &QH
5513	20, 196	WNR X1U1VQ
5514	45, 165	ZMV1MV1R
5515	49, 86 194	2OVYCN&MV1R
5516	22, 51 89	2OVYVO&MV1R &-NA-
5517	168	L B666 FYT&&J FUNQ
5518	40, 81	2OV1MV1R E D F
5519	46, 191	NC 1MVYR&R
5520	64, 237	Z2SYZUM &EH &EH
5521	23, 52 234	SHX&&YVQMV1
5522	105	L C666J EG
5523	177, 189	1V1UY2&O 2-NI-
5524	95, 179	2VR CO1 D01

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5526	16	L6UTJ C3 DVQ F1U8VQ
5527	163, 226	T5SW CUTJ
5528	23, 104 214, 234	SUYVQ1R DQ CO1
5529	140, 173 209	T56 BNVVJ CR BQ
5530	141, 169	T56 BNVVJ CR C
5531	21, 48 204	WNR BMVR BVQ
5532	21, 48 202	WNR DMVR BVQ
5533	18, 39	T 56J BMVR BVQ
5534	23, 69 213	ZR CQ EQ DVQ & 2 E.H2-S-04
5535	77, 148	T66 BNJ JOVMR
5536	164, 194	ZMV1CN
5537	73	10VMMV01
5538	77, 162	T6OTJ B10VMR
5539	74	L6TJ A A COVMR& E
5540	74	L6TJ A A COVMR& E
5541	74	1Y&1Y0VMR&1Y
5542	83, 133	T C566 BN HNT&EJ DVO2 FVO2
5543	89, 174 183	L5VYTJ BUNR& CVO2 EVO2
5544	73	RMVO2 2UU
5545	70, 103 132, 218	T6N CNTJ BN1R&2K16 &E
5546	154	T56 BNSNJ
5547	155, 229	T5MYSTJ BUS D
5548	155, 229	T5NYSTJ AY BUS
5549	155, 229	T5NYSTJ A1Y2&2 BUS
5550	166, 227	ZMR DSWQ
5551	115, 198	WNR BG CG FG ENW
5552	149, 219 240	T5M CNJ BSH D1YVO&K
5553	76, 100	GR CMVG2UU1
5554	87, 125 166	GR CG EG BMMVOY
5555	102, 154 214, 231	T5MVYSYJ CU1R EQ CO1& EUS
5556	20, 154 184	T66 BMV ES DHJ D1VQ D1VQ
5557	115, 199	WNR CNW ENW B1U1R BG
5558	219, 227	WSQR CKN F1 2U &G &G
5559	76, 110	GR CMVOYR
5560	76, 110	L6TJ AOVMR CG& A1UU1

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5562	76, 110	GR CMVO1YGU1
5563	46, 191	ZV1CN
5564	156, 185	T B666 HOVJ
5565	244	T5M CN BUTJ &TALL OIL ACIDS
5566	244	T5M CN BUTJ &COTTONSEED ACIDS
5567	244	T5M CN BUTJ &TALLOW ACIDS
5591	60, 150	T6N CN ENJ BZ DZ F2R
5595	60, 150	T6N CN ENJ BZ DZ F1N1&1
5596	60, 150	T6N CN ENJ BZ EZ F2N1&1
5597	60, 150	T6N CN ENJ BZ DZ F2&E&N1&- BT6N CN ENJ
5598	60, 150	T6N CN ENJ BZ DZ F- 2/X2&E&N4&/
5599	60, 150	T6N CN ENJ BZ DZ F- 2/X&E&N4&/
5600	60, 150	T6N CN ENJ BZ DZ F- 2/Y2&E&N1&/
5601	66, 99 150	T6N CN ENJ BZ DZ F- AL6TJ AOY02
5603	60, 150	T6N CN ENJ BMY DMY FMY
5604	68, 150 195	T6N CN ENJ BZ EZ FN1&Y2&CN
5605	60, 150	T6N CN ENJ BZ DZ F- 2M
5606	68, 150 195	T6N CN ENJ BZ DZ FN1&E- AL6TJ ACN
5607	60, 150	T6N CN ENJ BZ DZ F- 2/X&E&N1&/
5608	68, 150 195	T6N CN ENJ BZ EZ FN1CN&X&&1X
5609	66, 123 149	T6N CN ENJ BMX&&1X DMX&&1X FG
5610	60, 151	T6N CN ENJ BM8 DM8 FM8
5611	66, 123 149	T6N CN ENJ BM1Y DM1Y FG
5612	66, 123 150	T6N CN ENJ BMX DMX FG
5613	67, 123 150	T6N CN ENJ BMR& DG FG
5614	67, 123 150	T6N CN ENJ BZ DZ FG
5615	68, 139 182	T6N CN ENJ BZ DZ FX1V1
5616	66, 99 150	T6N CN ENJ BZ DZ F1OY04
5619	69, 142 185	T6N CN ENJ BZ DZ F- DT6MV DNTJ C C
5620	70, 131 142, 185	T6N CN ENJ B- DT6NV DNTJ AG C C
5622	118, 238	MUYZS1R CG DG
5623	118, 238	MUYZS1R BG DG
5624	118, 238	MUYZS1R CG DG
5625	118, 238	MUYZS1R BG DG

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6107	38	2VMR DMV1
6108	46, 178	2VMR DV1
6109	38	2VMR BR
6110	44, 109	GR D CMV2
6111	47, 197	WNR CNW DMV2
6112	35	1VN1&R
6113	38	2VN1&R
6114	38	2VMR DMV2
6115	46, 178	2VMR DVR
6116	35	4NR&V1
6117	35	5NR&V1
6118	35	2XR DMV1
6119	35	1VM1U1MV1
6120	45, 178	1VMR DV1
6121	40, 81	1VOR CMV1
6122	40, 57	1VMR DN1&1
6123	41, 91	1VMR EO1 EO1
6124	41, 91	2OR DO2 BMV1
6125	45, 143	T6NJ BMV1
6126	45, 141	T6NJ BMV1 F
6127	45, 141	T6NJ BMV1 C
6128	45, 141	T6NJ BMV1 D
6129	35	1Y&2NR&V1

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6132	42, 107	1VMR CG FMV1
6133	35	1VN1&1
6134	35	1VN1R&1R
6135	35	2Y2&MV1
6136	35	1VMR B DMV1
6137	38	5NR&V2
6138	38	2VNR&2Y
6139	38	2X&NR&V2
6140	37	5NR&V3
6141	36	3VN2&2
6142	36	3VM3
6143	36	1Y&NV3&Y
6144	36	3VM1Y
6145	36	3VMY2
6146	36	4N4&V3
6147	36	5MV3
6148	36	3VMY2&2
6149	36	5N5&V3
6150	36	3VN1R&1R
6151	36	3VN3&3
6152	36	3VM1R
6153	44, 108	ER DMV3
6154	36	L6TJ AMV3
6155	42, 92	3VMR D01
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6158	36	L66J BMV3
6159	37	VHN2&2
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6165	37	1Y&NVH1
6166	37	VHN4&4
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6168	37	VHN5&5
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6170	37	VHM7
6171	37	VHM8
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6185	41, 91	4MVR BO2
6186	47, 197	WNR BMV3
6187	41, 92	3N3&VR BO2
6188	41, 92	4N4&VR BO2
6189	41, 91	2OR BVM1R
6190	41, 92	3MVR BO2
6191	41, 92	2OR BVM1Y
6192	41, 92	1Y&NVR BO2&Y
6193	41, 92	2Y&MVR BO2
6194	41, 92	2OR BVN1R&1R
6195	41, 92	2OR BMVY
6196	37	L6TJ A- 2NVH
6197	49, 98	GR BMVR BO1
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6199	49, 98	GR DMVR BO2
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6203	41, 92	L6TJ AMVR BO2
6204	42, 92	2OR BVN1&R
6205	42, 92	2CR BVN4&R
6206	42, 92	2OR BVN2&R
6207	41, 92	L6TJ A- 2NVR BO2
6208	83, 162	T56 BO DO CHJ GYX&&OVX
6209	38	2N2&VX
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6212	41, 92	3MVR DO2
6213	41, 92	2OR DVN2&2
6214	41, 92	3N3&VR DO2
6215	41, 91	4MVR DO2
6216	41, 92	4N4&VR DO2
6217	41, 92	2OR DVM1Y
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6225	66, 99 136	T66 BNJ E HO1 JM2N2&2 &GH &GH
6226	66, 79 136	T66 BNJ E HO1 JMY3M3 &GH &GH
6227	58, 93	10R BZ D01
6228	168, 180	1VO20VMR
6229	35	1XMV1U1
6230	66, 99 133	T6NJ BX&R&O2N1&1 &QV3VQ
6232	137	T57 ANNNN&IJ
6233	69, 154 233	T56 BN DSJ CSH GZ
6234	174	RNU1R
6235	59, 141	T6NJ BZ C
6236	59, 141	T6NJ BZ F
6237	59, 141	T6NJ BZ D
6238	59, 136	T66 CNJ JM3N2&2
6239	63, 226	ZR DSWR DZ
6240	153, 223	T5NOJ CMSWR EZ& D E
6241	231, 243	SUYO2&S 2-ZN-
6242	231	1Y&OYUS&S 2-PB-
6243	231, 243	1Y&OYUS&S 2-ZN-
6244	201, 210	WNR BQ F ENW CY
6245	236	L66J CM 2YUS
6246	145, 236	T6M CN DHJ BSH D D F
6247	145, 236	T6N CN DHJ BSH D D F A- 2 DR
6248	31, 120 211	Q1R BQ EG
6249	168	1YUNOVMR C
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6251	58, 75	1N1&1YOVMR
6252	168	L6YTJ AUNOVMR
6253	50, 99 212	QR BVMR DO2
6254	37	R1VMV1R
6255	118, 174	GR CG D1UNR
6256	112, 148	T6NJ B1U1R BG DG
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6268	112, 168	GR DMVONUY
6269	62, 191	NCYR&1M2 &GH
6270	133	T B6 H666 CN FNJ
6271	67, 123 141, 174	T56 BVNVJ C2N1&1-/G 4
6272	134, 169	T66 BVNV EHJ CR
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6276	166	L666 B6 2AB PJ
6277	207	QR X9Y
6278	83, 161	T3OTJ B7VO1 C1- BT3OTJ D4
6279	19, 161	T3OTJ B7VQ C1- BT3OTJ D4
6280	66, 99 147	T66 BNJ HO1 JM3Z &GH &GH
6281	38, 142	T6NTJ AVR
6282	66, 99 147	T66 BNJ HO1 JM5MY3
6283	66, 99 147	T66 BNJ HO1 JM6N2U1&2U1
6284	143, 180	T6NTJ AYR&1VR
6285	66, 99 147	T66 BNJ D E JM5MY &EH &EH
6286	27, 145	T6N CN AUTJ B17 C2Q
6287	154	T6M CS ESTJ B D F &GH
6288	55	R2N1&2R &GH
6289	59, 136	T66 CNJ BM3N6&6
6290	59, 109	GR DMY&2MY &EH
6291	69, 143 226	T6NJ BSWR DZ& DZ
6292	222, 227	ZSWR DMYSWC&1YR&SWO &/-NA- 2
6293	32, 102 213	Q3R DQ CO1
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6295	86, 211	30VR BQ EQ XX
6296	87, 100 124	10VYEU1R CO1 D01
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6298	33, 90 103, 130	10VYNEYQR CO1 D01
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6303	32, 151 182	T6N DOTJ A1VYQYQYQ1Q
6304	83, 142	T6NTJ A2 COVYR&R &GH
6305	142, 167	T6NTJ A2 CQ
6306	168, 180	1VYUNOVMR
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6308	68, 183 212	QR BQ DV1M3R &GH
6309	34, 70 104, 214	QR BQ DYQ1MY1R D01 &GH
6310	83, 142	T6NTJ A COVYR&R &GH
6311	83, 142	T6NTJ A2 CO2YR&R &GH
6312	60, 147	T66 BNJ C H JM6N262
6313	139, 154	T C666 BN ISJ B- CT6NTJ A2 &GH
6314	59, 142	T6NTJ A CMYR&R &GH
6315	23, 51 225	QVR BVMR DSWMV1 &QH &QH
6316	33, 70 130, 133	T66 BNJ EMY&2N2&2Q IG &.H2-S-O4
6317	129, 144 184, 220	L B666J DG MV1- AT6KJ &E
6318	31, 120 148	T66 BNJ CR DG& JG EYQ- BT6NJ
6319	34, 70 131, 148	T66 BNJ CR DG& EYQ1N2&2 IG &GH
6320	34, 70 104, 131 148	T66 BNJ CR DG& HO1
6321	76, 110	GR DMVO2UU1
6322	112, 168	GR BMVONUY
6323	78, 100 124	1Y&01Y1GOVMR
6324	140, 173 200	T56 BVNVJ C12 GNW
6325	146, 170	T C565 DVNV JVNVJ E K
6326	146, 170	T C565 DVNV TVNVJ ER& KR
6327	146, 170	T C565 DVNV JVNVJ ER C& KR C
6328	146, 170	T C565 DVNV KVNVJ ER B& KR B
6329	146, 170	T C565 DVNV JVNVJ ER D& KR D
6330	146, 170	T C565 DVNV JVNVJ E2 K2
6331	146, 170	T C565 DVNV JVNVJ E3 K3
6332	146, 170	T C565 DVNV KVNVJ EY KY
6333	145, 170	T C565 DVNV KVNVJ E2U1 K2U1
6334	146, 170	T C565 DVNV KVNVJ E4 K4
6335	146, 170	T C565 DVNV JVNVJ E1Y K1Y
6336	146, 170	T C565 DVNV JVNVJ EY2 KY2
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6340	146, 170	T C565 DVNV JVNVJ E6 K6
6341	146, 170	T C565 DVNV JVNVJ E7 K7
6342	146, 170	T C565 DVNV JVNVJ E8 K8
6343	146, 170	T C565 DVNV JVNVJ E1R& K1R
6344	113, 145 172	T C565 DVNV JVNVJ ER BG& KR BG
6345	113, 145 172	T C565 DVNV JVNVJ ER CG& KR CG
6346	113, 145 172	T C565 DVNV JVNVJ ER DG& KR DG
6347	146, 173	T C565 DVNV JVNVJ E- BT6NJ& K- BT6NJ
6348	145, 173	T C565 DVNV JVNVJ E- K/- BT6 NJ C 2
6349	145, 173	T C565 DVNV JVNVJ E- K/- BT6NJ F 2
6350	113, 145 172	T C565 DVNV JVNVJ ER CG B& KR CG B
6351	146, 170	T C565 DVNV JVNVJ EY5&2 KY5&2
6352	17	QVR BVQ DVQ EVQ 8ZY4&2 4
6353	18, 39 80	1Y&MVR BVO 2-CU-
6354	95, 145 171	T C565 DVNV JVNVJ ER BO1& KR BO1
6355	95, 145 171	T C565 DVNV JVNVJ ER CO1& KR CO1
6356	95, 145 171	T C565 DVNV JVNVJ ER BO2& KR BO2
6357	95, 145 171	T C565 DVNV JVNVJ ER CO2& KR CO2
6358	95, 145 171	T C565 DVNV JVNVJ ER DO2& KR DO2
6359	95, 145 171	T C565 DVNV JVNVJ ER DO2& KR DO2
6360	18, 91	QV1U1R CO1 DO1
6361	23	L6TJ AQ A1 2UU
6362	156	T3OTJ B1R
6363	156, 180	T5OJ BR CV1U1
6364	23	QXR&1UU1
6365	23	L6TJ AQ A1UU1 DX
6366	26, 57	L B666 EY FUTJ A EUY KVQ K EQ1YM1Q
6367	20, 207	QVR XQ XQ XQ
6368	34, 162 167, 184	T6O DVJ BVR& CQ F1Q
6369	20, 207	QVR BQ CQ EQ XVQ
6370	38	2N2&VR D
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6380	62, 197	L B656 HYJ ENW HU1R DN1&1
6381	27, 140	T6NTJ A1YQR B EY &GH
6382	56	2N2&1R B D F C1N2&2
6383	62, 191	NCYR&1MY &GH
6384	101, 154 203	T56 BN DSJ CO4 GNW
6385	128, 215	T6N CNJ EG BM 2PO&R
6386	154, 223	T5N CSJ BMSWR DNU1 &-NA-
6387	66, 99 147	T66 BNJ HO1 JM6- AT6N DNTJ D1R &QVVQ
6388	18, 81	QV1Y12&VO4
6389	18, 80 81	4OVR BVO 2-CU-
6390	231, 243	L6TJ AOYUS&S 2-ZN-
6391	80, 162 187, 228	T56 BVO DHJ XSWO 2-CU-
6392	116, 209	QR DG B F
6393	211, 227	WSO&R XQ XY XX &-NA-
6394	227	I66J XYYX XSWO &-NA-
6395	116, 209	QR BG DG C E F- 21
6396	29, 134 241	T5MVNTJ A2Q
6397	64, 134 241	T5N CO AUTJ B11 D1Y&1X
6398	134, 241	T5NVNTJ A2Y&1X C2Y&1X
6399	153	T5MVNTJ C2Z
6400	201, 210	WNR B F DQ
6401	47, 218	6Y&R X1K&E1VM 22 &G &G
6402	236	SUYZMR BR
6403	151, 239	T6NJ BM 2YUS
6404	145, 236	T6N CN DHJ AR& BSH D D F
6405	134	T5N CNTJ A2Y&1X B1Y&1X C1Y&1X
6406	151	T6N CN ENTJ A- C- E-/2Y&1X 3
6407	145, 236	T6N CN DHJ AR BR& BSH D D F
6408	62, 192	NC2M18
6409	222	1X&&1X&&M 2SW
6410	33, 184 240	Q2MYUS&MX1V1
6411	184, 240	WNR DMYUS&MX1V1
6412	149, 228 239	T6N CN DHJ AR D BSWQ& BSH D D F
6413	137, 227 239	L66J CSWQ G- AT6N CN DHJ BSH D D F
6414	137, 227 239	L66J BSWQ GSWQ E- AT6N CN DHJ BSH D D F
6415	36	1MVR
6416	36	2MVR

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6418	36	1YMR
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6420	36	4MVR
6421	36	1Y1MVR
6422	36	2YMR
6423	36	1XMVR
6424	140, 172	T56 BNVVJ C- BT6NJ C
6425	36	1R BMVR
6426	36	1R CMVR
6427	36	1R DMVR
6428	43, 108	GR BMVR
6429	43, 108	GR CMVR
6430	43, 108	GR DMVR
6431	43, 108	GR DG BMVR
6432	36	5MVR
6433	140, 179	T56 BNVVJ C- BT6NJ F
6434	46, 197	WNR BMVR
6435	46, 197	WNR CMVR
6436	46, 197	WNR DMVR
6437	46, 197	WNR CNW DMVR
6438	16	L B666 FUTJ A E F1U1 KVQ K
6439	84, 179	L4TJ AV1 B B C1V012
6440	94, 161	T D3 C555 A EOTJ J02 20
6441	30, 98	Q1YQ1OR DG
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6442	142	L B666 FUTJ A E1U1 E KVQ K &T6NJ
6443	85, 192	NCXCN&OV1
6444	25, 39	QY&1MVY4&2
6445	25, 57	2Y2&YQ3N1&1
6446	61, 179	4Y2&YV1&N1&1
6447	26, 57	1X&&1Y&1YQ3N1&1
6448	241	1X&&1X&EM 2V
6449	19, 136	T5 I6 F666/FO/FS 3AEF S BNVV FX RUTJ CR& JVQ J N RY
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6451	133, 230	T5NYNJ A2MYS&US BUS &-NA-
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6452	54	3MY3&1UU1
6453	55	1N1&Y3&1UU2N1&1
6454	56	1X&&1X&&M2UU2N1&1
6455	54	1X&&1X&EM2 2UU
6456	150	T6N CN ENTJ AR& CR& ER
6457	56	1X&&1Y&1YN1&1&1 2UU
6458	55	1X&&1Y&1YN1&1&1 22
6459	150	T6N CN ENTJ A12 C12 E12
6460	155	T5NSWN1J A2Y&1X C2Y&1X
6461	53	QV1SYUS&O4 &L6TJ AZ
6462	145, 236	L66J B- AT6N CN DHJ BSH D D F

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6464	145, 236	T6N CN DHJ BSH D D F A- 2CR
6465	145, 236	T6N CN DHJ BSH D D F AR D- 2
6466	231, 243	2Y&OYUS&S 2-ZN-
6467	145, 236	T6N CN DHJ AR& BSH D D F
6468	236	SUYZMR D- 2
6469	26, 57	L B666&&TJ HYQ1N2Y&&2Y &GH
6470	51, 205	L6TJ AR BQ ENW CVM4
	214	
6471	116, 209	QR BQ DG
6472	71, 90	QR DE BR& FVO2NY&&Y &GH
	131, 214	
6473	155, 188	T5NS DNJ CS-HG-2 RS-HG-2
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6474	72	T6OBOTJ E E BO1 2X
6475	25, 56	L566 1A LT&J HYQ1N3&3
6476	68, 153	T6N DOTJ AYR&YVR&N1&1R
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6477	68, 89	T66 BOVJ DVO2N1R&1R &GH
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6478	61, 139	T56 BVNVJ C1R CZ F
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6479	149, 223	T6NNJ CMSWR DZ& F
6480	59, 132	T5M CN BUTJ B1NR&1R &WSQ1
6481	153, 183	T6N DOTJ A- 2/YVR&YR CNW&/
	204	
6482	153, 183	T6N DOTJ A2V- CT'5OJ BR& FR
6483	153, 183	T6N DOTJ A2V1U1- BT5OJ
6484	50, 122	QR DE BR& FVN1&1
	212	
6485	158	T70 CO EUTJ BY2
6486	80	2U1VOY
6487	71, 90	T70 CO EUTJ B1U2
	131, 214	
6487	158	QR DI BR& FVO2NY&&Y &GH
6488	158	T70 CO EUTJ BY
6490	47, 208	QR BR& FVM4
6491	26, 81	2U1OV1 2XQVO1U2
6492	81	2U1OVYU1&1VO1U2
6493	18, 81	QVYU1&2VO2U1
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6501	50, 122	QR DG BVM1U2
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6507	45,141	T6NJ BMVR& C
6508	50,122 212	QR DG BVMY2
6509	50,122 212	QR DG BVM3
6510	155,234	T6N CS DHJ BQ D D F &-NA-
6511	155,234 243	T6N CS DHJ D D ES 2-ZN-
6512	141	T6N DM1J A1R& D1R &GH &GH
6513	59,109	L6TJ AN1R&1R DE
6521	87,125 159	T5CJ BVO2G
6534	50,122 212	ZVR BQ EG
6535	50,122 212	QR DG BVMX
6536	29, 64 98	L B666&&TJ HYQ1N4&R DO1 &GH
6537	26, 57	L B666J DYQ1N3Y&3Y EY K &GH
6538	29, 64 97	L66J BYQ1N4&4 CO1 &GH
6539	25, 57	L66J BYQ2N5&5 &GH
6540	34, 71 104,148	T66 BNJ EYQ3N4&4 HO1 &GH
6541	61,179	L B666J DVY&N5&5 F LY
6542	152,219	T6K DOTJ A16 A1- ET3OTJ &G
6543	44,131	T5N CN AUTJ P17 C2MV1
6544	21,152 219	T6K DOTJ A2VQ A18 &OVN1&1
6545	28,218	Q2K&16&1YQYQYQYQ1Q &E
6546	32,152 183,219	T6K DCTJ A1R& A1/Y&V1- 7YQ &G
6547	58	2NR&1N2&R
6548	146,221	T5KTJ A12 A2 B E &WSO&O2
6549	147,221	T5KJ A16 A &WSO&O1
6550	155,221	T6K DSJ A16 A &WSO&O1
6551	155,221	T6K DSJ A16 A &WSO&O1
6552	218	12R DK2&2&2 & 2WSO&O
6553	146,221	T5KJ A18 A2 B E &WSO&O2
6554	142,220	T6K DKJ A12 A2 D12 D2 &WSO&O2 2
6555	70,103 129,131	T C666 BNJ EG IM1YR&2N2&2 &GH &GH
6556	67,123 182	1MR DE B1VF

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6558	33, 70 103, 130	ZOR BG DYQYZ3R
6559	29, 64 119	GR BYQ1N8&8
6560	70, 103 130, 132	T C666 BNJ F01 IM1YR&2N1&1 &GH &GH
6561	152	T6N DOTJ AOP0&O4&O4
6562	152	T6N DOTJ A16
6563	217	12K1R &WSO&1
6564	217	12K1R &WSO&12
6565	152, 219	T6K DOTJ A16 A &WSO&R D
6566	96, 218	8R DO2O2K2 &WSO&12
6567	152, 219	T6K DOTJ A16 A2 &WSO&1
6568	152, 219	T6K DOTJ A16 A2 &WSO&12
6569	139, 216	T3NTJ A- 3PO
6620	32, 128 183	GR DYQVR DG
6621	63, 71 208	ZR BQ E-AS-O
6622	29, 64 97	L66J BYQX&&1N4&4 EO1 &GH
6623	52, 68 89	ZVR DVO2
6624	25, 56	STRUCTURE UNKNOWN
6625	63, 208	ONX&&R BQ DX&&1X
6626	144, 167	T66 AN EM FHT&J DQ
6627	94, 148	T66 BNT&J HO1 B9- AT6NTJ
6628	94, 148	T66 BNT&J HO1 B10- AT6NTJ
6629	26, 57	L B666J DYQ2N4&4 EY K
6630	26, 57	L B666J DYQ2N6&6 EY K
6631	132, 242	T6VMVNV FHJ DR& F2
6632	104, 134	T56 BM DN&IJ CNUYZZ
6633	66, 123 147	T66 BN BUTJ EY&2YZN2&2 IE &QPQQO
6634	142, 220	T6K DKJ A16 A2 D16 D2 &WSO&O2 2
6635	52, 226	WS1R DYZUM &GH
6636	67, 124 226	ZR DSWR DZ CG
6637	63, 226	ZR DSWR DM3
6638	52, 70 137, 226	T6NJ CVMR DSWR DZ
6639	23, 52 148, 226	T5NJ AR DSWR DMV2VQ&& B E
6640	30, 65 120	L66J BXQG1N6&G &GH
6641	67, 123 182	GR DV2YZ1R &GH

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6642	69, 103 129, 184	2OR BG DV1N1&1R &GH
6643	143, 222	T6N DNJ B- C-/MSWR DMV1 2 E F
6644	70, 103 130, 131	T C666 BNJ EG LO1 IMY1R&2N2&2 &GH &GH &QH 3
6645	134, 223 242	T5MVMV EHJ E1SR& ER
6646	69, 103 130, 132	T C666 BNJ EG LO1 IYZZN2&2&- DT6NJ &GH 3 &QH
6647	223	1SYS1& 2
6648	51, 102 183	1VMR BV1 X01
6649	30, 65 211	Q2M1R BQ CR
6650	25, 57	L66J BYQ2N3&3 &GH
6651	94, 147	T66 BNJ C2R D01
6652	94, 147	T66 BNJ E2R D01
6653	94, 147	T66 BNJ E2R D01& H01
6654	30, 65 211	Q2M1R BQ EX2
6655	30, 65 211	Q2N2Q1R BQ EX
6656	63, 208	L6TJ AR CQ EX B1N1&1
6657	63, 208	2N2&1F BQ C EX&&2Y
6658	29, 64 98	L66J BYQ1N5&5 C01 &GH
6659	63, 208	5Y&R CQ EY5 E1N1&1
6660	63, 208	5Y&R CQ D1N1&1
6661	63, 208	12R XQ X1N1&1
6662	30, 65 211	Q2M1R BQ EX
6663	25, 57	L66J BYQ3N7&7
6664	63, 208	6Y&R DQ C E1N1&1
6665	60, 147	T6NJ EYN2&2&2YZ HN1&1
6666	144	L66J B2- BT6NJ &GH
6667	34, 70 131, 143	T66 BNJ EM1YQ1N2&2 IG
6668	129, 149 223	T6N CNJ BMSWR DZ& EE
6669	30, 65 120	L66J BYQ2N2&2 EG &GH &QH
6670	30, 65 120	L66J BYQ1N5&5 CG &GH
6671	31, 120 152	T6N DOTJ A1YQR DG& B2 &GH
6672	30, 64 119	Q2M1R DE &GH
6673	69, 128 213	1X&&R CQ EE D1N1&1

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6674	33, 70 130, 214	Q2M1R BQ CE EX
6675	33, 70 130, 214	Q2M1R BQ CG EX
6676	30, 65 120	I66J BYQ1M12 EE
6677	67, 123 182	2N2&R D1R XG D1M1VR
6687	35	AMV1
6688	38	AMVY
6689	44, 109	G2VM1
6690	48, 225	ZSWR DMV5
6691	73, 151	T56 BMVOJ
6692	45, 141	T6N DNIJ AV1 D12
6693	45, 141	T6N DNTJ AV11 EV11
6694	81	10VYVO1&U1R
6695	39	RMVYVMR&U1R
6696	161, 205 222	UNKNOWN STRUCTURE
6697	69, 132 221	T6NJ BM- BL6V DVJ E- 2M
6698	104, 132	T56 BN DNJ B1V1 CZ
6699	68, 89 213	ZX&&R BQ EVO1 CXZ
6700	20, 145 185	T5MVTJ C5 DR& EVQ
6701	156, 164 204	T5CJ BNW E1UNMVMVZ
6702	30, 65 211	Q2N2Q1R EQ CR& EX
6703	63, 226	ZR DSWR DM12
6704	152, 225	T6N DOTJ A- 2SW
6705	149, 185	T5NNVJ A BR& EMSWN1&1 E
6706	222	1N1&SWMR BR
6707	142, 225	T6NTJ ASWN1&1 B
6708	152, 225	T6N DOTJ ASWN1&1
6709	154, 223	T5N CS AUTJ EMSWR DZ& D D
6710	67, 123 182	L B666J DV1N2&2 HE
6711	128, 166 205	WNR CNW DMNUY7&R BG
6712	59, 141	T6NJ BZ F EGH
6713	50, 122 212	ZVR BQ EG
6714	50, 122 212	QR DG BVMX
6715	50, 122 212	QR DG BVM5

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6718	50,122 212	QR DG BVM8
6719	34, 52 131, 214	Q2MVR BQ EG
6720	50,122 212	QR DG BVM1R
6721	34, 52 131, 214	Q3MVR BQ EG
6722	50,123 212	QR DG BVMR
6723	50,123 212	QR DG BVMR BG
6724	50,123 212	QR DG BVMR CG
6725	50,123 212	QR DG BVMR DG
6726	50,123 212	QR DG BVMR BG EG
6727	52,131 206, 214	WNR BMVR BQ EG
6728	52,131 206, 214	WNR CMVR BQ EG
6729	52,131 206, 214	WNR DMVR BQ EG
6730	51,123 212	QR DG BVMR B
6731	51,123 212	QR DG BVMR C
6732	51,123 212	QR DG BVMR D
6734	137,169	T5VNVJ BY
6735	137,169	T5VNVJ BR
6736	137,169	T5VNVJ B- 2 CR
6737	84,137 171	T5VNVJ B2V01
6738	28,137 171	T5VNVJ B1Q
6739	176	OCNY
6740	45,136 171	T5VNVJ BVZ
6741	45,136 171	T5VNVJ BVMX
6742	86,241	ZVMV1U1V01 & ZV1U1VQ
6743	89,128 242	ZVMV1U1V02G
6744	89,205 242	ZVMV1U1V01Y2&NW
6745	89,102 242	ZVMV1U1V02OR D8

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6747	86, 241	ZVMV1U1VO1
6748	86, 241	1XMVMV1U1VO1
6749	86, 241	1Y&OV1U1VMVMX
6750	17, 39	QV1U1VMY
6751	17, 39	QV1U1VMR
6752	21, 241	ZVMV1U1VQ
6753	88, 228 243	WSO&MVMV2VO1 &-NA-
6754	88, 228 243	ZVMV2VO12SWO &-NA-
6755	88, 228 243	WSO&10V2VMVMX &-NA-
6756	88, 228 243	1Y&OV1YSWO&VMVMX &-NA-
6757	88, 228 242	WSO&120V2VMVMX &-NA-
6758	32, 89 242	ZVMV1U1VO2Q
6759	137, 173 233	T5VNvj B1SCN
6760	22, 35 51	VHMV1U1VQ
6762	52, 148 174, 232	T5VNVTJ BVZ DSV1
6763	133, 173 230	T5VNvj B1MVS4
6764	136, 173 175	T5VNvj BNU1R
6765	46, 191	ZV1U1CN
6767	153, 206	T6NOTJ ANO X
6768	153	T6NO DUTJ AR
6769	55	1N1&R B- 2
6771	15, 90 162	T5VOVTJ D1R DO1
6772	20, 207	QV1YVQ1R DQ
6775	174, 209	L66J BY CQ DQ E1UN6 GQ I H- 2
6776	80, 126 148, 167	T66 BNJ GG IG JO 2-CU-
6779	81	4OV2:04
6780	50, 123 212	QR CE FVMR CE
6782	25, 40	QY5&11VM2Q
6783	25, 39	Q2MV5VQ2U9
6784	25, 40	QY5&11VM 22
6785	34	VH6 & .H2- S-03
6786	25, 39	QY6&10VM 22
6787	15, 151	T66 BMVOVJ
6788	143	T6N DNJ B C E F

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6790	142, 206	T6N DNTJ ANO B DNO E
6791	59, 141	T6M DNTJ D2Z
6792	141	T6M DMTJ B2 E2
6793	142	T6M DNTJ D2
6794	142	T6M DNTJ DR
6795	142	T6M DMTJ B C E F
6796	146	T5MTJ B E
6797	15, 162 167, 185	T5VOVTJ EV1 EV1
6799	79, 157	T5OVOJ D
6801	27, 134	T5N CNJ A2Q
6802	26, 75	QY10VM2Q
6803	53	L6TJ AZ D9
6805	79, 111 157	T5OVOJ D1G
6806	53	L6TJ AZ BZ
6807	79, 111 157	T5OVOJ DG
6808	26, 75	Q20VM12
6809	74, 153	T5MVOTJ D
6810	74, 153	T5MVOTJ DR
6811	26, 75	ZVO2Q
6812	27, 153	T5N COTJ A2Q B9
6813	244	Z2N2ZYUS&SH
6814	26, 75	Q20VM1R
6815	114, 156 186	T B666 HOVJ DG
6816	18, 91	QVR BR B01
6817	157	T B666 HO IHJ I I
6818	28, 107	QXR BR BQ
6819	156, 186 201	T B666 HOVJ DNW
6820	83, 159	T5OJ BVO16
6821	83, 160	T5OJ BVO18
6822	83, 159	T5OJ BVO22
6823	87, 125 160	T5OTJ BVO12 BG CG DG EG
6824	87, 125 160	T5OTJ BVO16 BG CG DG EG
6825	87, 125 160	T5OTJ BVO18 BG CG DG EG
6826	87, 125 160	T5OTJ BVO22 BG CG DG EG
6827	87, 125 160	T5OTJ BVO2G BG CG DG EG
6828	88, 160 203	T5OJ BVO1 ENW

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6830	19, 157	T5OJ B2U1VQ
6831	59, 159	T5OJ B1Z
6832	59, 159	T5OTJ B1Z
6834	155, 180	T5OJ B1U1V1
6835	44, 158	T5OTJ BVZ
6836	117, 228	GYGUYGSWO1XGGG
6837	227	WSO&4 &-NA-
6954	240	L6TJ A- 4-SN-
6961	71	R-SB-R&R
6962	71	G-SB-GR&R&R
6963	240	R 4-SN-
6969	224, 240	S-SN-4&4
6970	224, 240	12-SN-4&4&12
6971	229, 240	4N4&YUS&S 2-SN-4&4
6972	214, 240	T4OPO-SN-J B05Y B0 D4 D4
6973	141	T6M DMTJ &QH 6
6974	149, 223	T6NJ BMSWR DZ
6975	153, 240	T6N DOTJ A4 2-SN-GG
6977	176	L6V BUTJ B EYU1
6978	81	20V8VO2
6979	61, 139 166	T66 BVMMVJ GZ
6980	175	.NA2.MO-O4
6981	175	.MO-O3
6982	15, 162	T5VOVTJ X12
6983	176	OCNR B CNCO &OCNR B ENCO
6985	176	OCNR B ENCO
6986	176	OCNR B D- 2
6987	176	OCNR D1R DNCO
6989	72	1Y&O 3B
6990	72	1O 3B
6991	175	.LI..Q.QH
6992	175	.B2..O3
6993	175	.NA2.B4-O7.QH10
6994	62, 197	WNR BNR&R
6995	151, 166	T6MMVMMVJ &T5MMVNvj DZ
6996	115, 198	WNR BG DG ENW
6997	177	L6V CVTJ E E
6998	28, 135 219	T5K CN BUTJ A2Q A1R& BA &G
7006	27, 135	T5N CN AUTJ E8U9 C2Q
7008	245	UNKNOWN STRUCTURE
7009	84, 136 171	T5VNvj B1CV1 D
7023	177	L6VTJ
7024	177	L6VTJ D
7025	168	QNUYR&2R

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7026	167	QNUY1R&1R
7027	168	QNUY2R&2R
7028	156, 180	T5CJ B1U1VR
7029	162, 167 187	T66 BOVJ E IQ
7030	167	QNUY2R
7032	158, 168	T5OJ B1UNQ
7033	164, 199	ZMVR CNW
7034	181, 201	WNR C1U1VR
7035	155, 180	T5OJ B1U1V1
7036	79	RMMVMMR
7037	234	ZMYUS&MR
7038	19, 143	T B656 HMJ DX LX
7039	165	4UNMR
7040	144, 185	T6NVJ A
7041	42, 107	E1VMY2
7042	216	1N18 3P
7043	193, 201	WNR DCN
7044	168, 211	QNU1R BQ
7045	29, 168	QNUIR&YQR
7046	168, 180	QNUYR&VR
7047	35, 51 128	VHGGYG &ZV2
7048	38	ZV1Y
7049	42, 107	G1VMR
7050	36	ZVY2&2
7051	42, 107	GYGVMR
7052	47, 208	ZVR BQ
7053	42, 107	GXGGVMR
7054	225	WSR&MR
7055	69, 224 225	ZSWR DZ CS 2
7056	37	11VMR
7057	36	RVMR
7059	47, 207	QR B1UNV1
7060	228	SUIMR
7061	225	ZSWR D
7063	42, 107	ER BMV1
7064	42, 107	GR DMV1
7065	38	2VMR
7066	154, 166	T56 BN DSJ CMZ
7067	64, 221	T C666 BV TVJ DZ
7068	38	5VMR
7069	154, 223	T5N CSJ BMSWR DZ
7072	117, 163 226	T56 BSWTJ CE DE
7073	117, 163	T56 BSWJ CE
7074	226 176	L B666&TTJ A EY KNCO K

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7075	193, 210	QR D1UYCN&CN
7076	95, 192	NCYCN&U1R CO2 DO2
7077	193, 201	WNR X1CN
7078	62, 191	ZR BCN &GH
7079	37	RMV1U1R
7080	229	SUVR&MR
7081	104	MUYMR&NR&R
7082	104	1R BMYUM&MR B
7087	113, 149	T5VNVTJ BR& DG ER XG
	172	
7088	163	T67 GO JS&TJ C
7089	118, 238	MUYZS1R-/G 4 &GH
7090	102, 128	GR CG DO2SYUS&N1&1
	230	
7091	96, 230	1N1&YUS&S2OR D
7092	116, 209	QR BG FG D- 2X
7093	206	QR B9 D F- 21
7094	21, 48	QVR BVMR CG DG
	119	
7095	118, 239	SUYM1&MR DG
7096	115, 192	NCYR&1U1R BG
7097	191	NC2XCN&CN&2CN
7098	114, 179	GYGVR DG
7099	45, 149	T5VNVTJ BVZ
	171	
7100	31, 120	Q1R BQ EG C- 21
	211	
7101	94, 164	1Y&UNMSWR D- 20
7102	136, 173	T6NVNVNJ AR& CR& ER
	242	
7103	163, 230	T5SJ BSYUS&N1&1
7104	129, 163	T5SJ BS1R DG
	224	
7105	128, 183	L6VTJ BSR DG
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7106	71, 151	T5MN DNJ CMZ DZ ESH
	166, 234	
7108	111, 163	T68 GO KS&TJ CG IG
7109	48, 206	ONNV7& 22
7110	51, 129	ZVMMVR DG
	242	
7112	24	L56 BXT&J D D B- & 2
7113	222	ZVMMV1 2U
7114	59, 143	T6NJ B E2MR
7115	154, 233	T <sup>r</sup> 5 BN DSJ CSCN
7116	117, 224	G2SR
7117	117, 223	GR DS1SR DG
7120	132, 180	T56 BM DNJ C2VR
7121	155, 239	STRUCTURE UNKNOWN

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7126	44, 109	GR CMV 2
7129	157, 167	T66 BOVJ EQ D- 2S
	187, 223	
7133	181, 201	WNR DVR DNW
7135	83, 144	T6NJ C1VO2
7138	135, 219	T5K CNJ A1R& C E11 &E
7139	241	RXR&R&MVM1R
7140	41, 92	ZVR BO2
7142	31, 120	WN1YQXGGG
	202	
7143	31, 120	GXGGYQ1MVR
	202	
7144	29, 48	GXGGYQ1MVR
	119	
7145	196	WN1U1R CNW
7146	115, 208	QR-/G 4 BQ
7147	96, 198	WN1U1R C01 D01
7148	101, 204	WN1U1R DQ C01
	213	
7149	96, 198	WNY&U1R C01 D01
7151	127, 158	T5OJ BG E1U1NW
	204	
7152	115, 199	WN1U1R BG DNW
7153	115, 199	WN1U1R BG DG
7154	163, 199	T5SJ B1U1NW
7158	58, 93	R2N1&1R DO 23 &GH &GH
7159	157, 185	T66 BOVJ E
7160	58, 93	6N1&1R DO 22
7161	141, 165	T6NJ BVMZ
7164	27, 106	QX2&2&1UU1G
7166	147, 241	T66 BMVNvj D4
7167	22, 119	T5OJ BVQ CG DG
	160	
7168	87, 125	T5OJ BVO2 CG DG
	160	
7171	112, 133	T6NJ B1U1R DG
7172	112, 144	T6NJ D1U1R DG
7173	37	3VMR
7174	39	RMV1VMR
7175	174	R1UNYR&NU1R
7176	174	RNU1R
7177	176	RVR
7178	42, 107	E1VMR
7179	44, 109	ER BMV2
7180	47, 208	L6TJ AMVR BQ
7181	42, 107	E1VMR B
7182	47, 208	L66J BMVR BQ
7183	119, 223	ZSWR DMV1E

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7185	161, 193	T5OYTJ BUYCN&CN
7186	168	QNUYR& 2
7187	54	1U2MR
7188	226	WSR&R
7189	165	RMNU1R
7190	162, 180	T C666 BO IVJ
7191	164	1VMMR
7192	222	ZVMMR
7193	158, 222	T5OJ B1UNMVZ
7194	61, 178	ZR DV1
7195	225	ZSWR D
7196	58, 93	1Y&M1R DO 26
7197	176	RVR
7198	132, 184 227	T5NNV DHJ AR DSWQ& E
7199	168	QNUY&YUNQ
7200	28, 178	L6VTJ BQ
7201	166	1UU1R
7202	34	VH2R
7203	177	4VR
7204	27, 91	Q1R DO1
7205	90	10R D
7206	94, 111	GR DO2
7207	90	10R BO1
7208	96, 198	WNR BOR
7209	34, 91	VHR BO1
7210	80	1VOR B
7211	224	2SR D
7213	51, 147 232	T66 BNJ GMV1 JSV1
7214	29, 48 119	Q2MV1R DG
7215	64, 237	MUY2S2N2&2 &GH &GH
7216	235	MUY2S2 &EH
7217	156, 199	T5I, BOJ DNW
7218	134, 234	T5N CNJ A2 BSH
7219	133, 205 224	T66 BNJ GNW JS 2
7220	242	ZVMV1R
7221	70, 145 167, 206	T6N CNJ BZ DZ ENO FQ
7222	142, 193	T6NJ A2XR&R&CN
7224	23, 70 103, 130	QVR DG FMR DO1
7226	103, 130 132, 184	T C666 BN IVJ EG LO1
7227	191	L5TJ A1CN
7253	117, 227	WSR&OR BG DG

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7255	56, 73	1N1&1 & 3B
7256	54, 72	1M1 & 3B
7257	73, 144	T6NJ X- 3B
7258	25, 57	Z2M2Q 3GH
7261	31, 120 202	WNY&YQXGGG
7262	94, 141	T6NTJ A1R C F01& B &GH
7263	22, 51 102	QV10R BVM2U1
7264	22, 119 138	T6NJ CVQ EF
7265	19, 137	T56 BMJ D1YVQVQ
7266	94, 141	T6NTJ A1R C01 D01& B &GH
7267	151, 209	T6NTJ A1R BQ E& B &GH
7268	137, 209	T6NTJ A1R BQ C E& B &GH
7269	141, 224	T6NTJ A1R C FS1& B
7270	58, 93	10R D2 2M &.H3-P-O4
7272	89, 205 214	WNR DQ CVO2
7273	83, 136	T56 BMJ CVO2
7275	148	T6MVMVXVJ E-& AL5XTJ
7276	132	T56 BM DNJ C1R
7277	115, 208	QR DQ-/G 4
7278	206	ONR DMR
7279	165	ZVMMVZ
7280	55	L6TJ AMR DMR
7282	165	ZVMVZ
7284	55	RMR DMR
7285	117, 222	L6V DVJ-/G 4
7286	154, 233 243	T56 BN DSJ CS 2-ZN-
7287	229, 243	R1N1R&YUS&S 2-ZN-
7288	229, 243	1N1&YUS&S 2-ZN-
7289	56	ZR DMR
7290	240	1N1&YUS&S 2
7291	31, 120 211	Q1R BQ EG C- 21
7292	154, 223	T56 BN DSJ CSM- AL6TJ
7293	164	ZMV1U1VMZ
7294	143, 166	T6VMMVJ
7295	231	SUYO4&S 2
7296	240	4N4&YUS& 2S
7299	53	ZR DIR DZ
7301	216	2SPS&S2&O2